RECREATION ON AGRICULTURAL LAND IN ALBERTA

Alberta

ENVIRONMENT COUNCIL OF ALBERTA

Recreation on Agricultural Land in Alberta

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PREFACE

In recent years, the Environment Council has become aware of a number of concerns about the long-term security of the agricultural land base. An in-depth look at the present status of the agricultural land base and at impacts that may affect the land base in the future seemed warranted. Accordingly, the Environment Council is investigating this important topic.

Since settlement of this province began, farming and ranching have been important aspects of life in Alberta. Agricultural land dominates the landscape in central and southern Alberta, as rich farmlands stretch to the horizon. Throughout the years, breaking of new farmland has continued at the fringes of settled areas, and land has been improved for agricultural use. The land base used for agriculture has increased, as have yields and production of crops. Agriculture has become an integral part of the social and economic fabric of Alberta.

In recent years, however, some concerns have been raised about the long-term security of the agricultural land base in Alberta. As the province grows, more land is needed for housing, transportation, and recreation. The amount of new land available for agriculture is limited. Resource extraction is expanding rapidly. Some farming practices, such as summer-fallowing, may be affecting soil fertility or land productivity. The acreage of land affected by salinization is increasing. Other activities, within or outside farming, are also having an impact on agriculture. The effects of each may be small, but evidence has been mounting that the cumulative effects may threaten the security of the agricultural land base itself.

In general, there appear to be three types of concerns:

1) loss and fragmentation of agricultural land
2) impacts on the capability of the land to produce agricultural products
3) impacts of other activities that influence the effectiveness and efficiency of agricultural activities.

The effects on agriculture can be direct, as in the loss of land, or indirect, as in the loss of service industries in a rural area. Some of these threats come from outside the agricultural industry, while others arise from agricultural activities and practices themselves.

The Environment Council investigation will examine the types and magnitude of perceived threats to the security of the agricultural land base and will speculate on some implications for the future. Problems for agriculture will be identified and discussed in light of what is being done about them now and what could be done about them in the future.

A series of reports has been prepared for this investigation. Some of them present background information which sets the stage for further examination of the subject. Other reports look at the three types of concerns outlined earlier. These reports are intended to provide information to stimulate public discussion about the security of the agricultural land base. It is anticipated that public hearings on this topic will provide an opportunity for Albertans to air their concerns, confidence, pessimism, or optimism about agriculture in Alberta.

This report examines the impact of outdoor recreation on Alberta's agricultural land base.

The Environment Council acknowledges the important contribution this report makes to the investigation of the security of the agricultural land base. However, the views expressed are those of the author. The Council cannot accept responsibility for statements or opinions given herein, and does not guarantee the accuracy of statistics or quotations presented.

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INTRODUCTION

Involvement in some form of outdoor recreation has become an integral part of the lifestyle of most Canadians. Outdoor recreation by definition is a land-use activity and as such, access to and the use of the land resource base is an essential ingredient of the recreation experience.

The use of agricultural land for recreational purposes is not a new phenomenon. Traditionally, the rural environment provided the impromptu setting for many outdoor recreation experiences. During the twentieth century, however, the gradual establishment of an institutionalized recreation delivery system (see Ellis and Knott 1975) has meant that an increasing emphasis has been put on the three levels of parks – national, provincial and municipal – in providing the core of the resource base for outdoor recreation. Increasing attention is is now being focussed on both the existing and potential role that areas outside the park boundaries can play in accommodating the continued growth in outdoor recreation. Sadler (1978) has evaluated the contribution that the forested areas make to the recreation resource base in Alberta. This study complements his report by providing an examination of the recreational use of agricultural land in the province. More specifically, this report explores the types and level of interaction between recreation and agriculture in the Province of Alberta with particular reference to the effect of this impact on the potential productivity of the agricultural land base. As a result, this study provides one specific contribution to the broader assessment of the security of the agricultural land base in Alberta which is being examined by the Environment Council of Alberta (Thompson 1981).

THE AGRICULTURAL LAND BUDGET AND RECREATION

The growth and development of Alberta over the last one hundred years has been closely associated with the expansion of the area under food production. Agriculture is the second largest user of land in the province after forestry (Ward 1975) and accounts for 51.7 million acres or 31.6 percent of the land area of Alberta (Alberta Agriculture 1980). Within this agricultural land-use category, 30.2 million acres (58.4 percent) is classified as improved land involving crop and livestock production and the balance, 21.5 million acres (41.6 percent), exists as unimproved land. It is estimated that a further 22.2 million acres could be brought under cultivation (Alberta Economic Development 1980), although this figure is regarded as being overly optimistic by Thompson (see Thompson 1981b).

Despite the considerable extent of the province under agriculture and the apparent potential for expanding the cultivated area, concern is being expressed about the adequacy of Alberta's agricultural land base and its security over the long term (Alberta Land Use Forum 1976, Crown and Kocaoglu 1974, Thompson 1981a). In comparison with Alberta, the security of agricultural land in British Columbia (Crerar 1954, Lower Mainland Regional Planning Board 1962, Rawson 1972) and Ontario (Krueger 1957, Pearson 1962, 1969) has been an area of concern for a considerable time. What is particularly significant about the current interest in the agricultural land base in Alberta is that similar attention is being focussed on this land-use issue in other provinces (Manitoba 1980, Saskatchewan Agriculture 1980) and at the national level (Bentley 1980, Gierman and Lenning 1980, Runka 1980, Welch 1980).

A detailed assessment of the agricultural land budget of Alberta is outside the scope of this study. Nevertheless, it is essential to identify the major issues involved in order to acquire a realistic appreciation of the impact of outdoor recreation on agricultural land.

The most distinguishing feature of studies that have examined the nature of the agricultural land budget in Canada (Bryant and Russwurm 1979), the United States (National Agricultural Lands Study 1981) and Britain (Edwards and Wibberley 1971) is recognition of the complexity of determining how much land will be needed for food production in the future. All three studies stress the need to recognize that the agricultural potential of farmland is not solely dependent on the characteristics of the land base, but also on the other factors of production, such as labour and capital, and the opportunity that exists for substitution between the various factors involved in the agricultural production system. Edwards and Wibberley (1971) in their British study and Bryant and Russwurm (1979) in their overview of the impact of non-farm development on agriculture in Canada emphasize the need for a balanced assessment of the issue. Both of these pairs of authors and the National Agricultural Lands Study (1981) are cautiously optimistic about the future. However, all three studies emphasize the unpredictable nature of future trends and consequently call for appropriate action to safeguard the potential productivity of the agricultural land base and the options that may have to be adopted to meet increasing demands for food.

Particular concern is expressed over the increasing pressure on agricultural land from outside agriculture and the diversity of claimants to the use of rural land. Urban development, industrial expansion and the proliferation of communication and transportation arteries represent this trend most clearly. The expansion of these forms of land use has to be accepted as inevitable. However, an analysis of the changing land-use pattern of most industrialized countries shows that because agriculture is the dominant land user in terms of area where these developments tend to take place, the expansion of any alternative form of land-based activity usually results in a further reduction in the area available for food production (Berry and Plaut 1978, Best 1979, Hart 1976, Maguire 1979, Raup 1975, Rodd 1976, Russwurm 1977a). More specifically, "as an extensive user of land agriculture competes for land after the more intensive uses such as urban development have been satisfied. In practice ...agriculture will adjust itself to the area of land left to it to use." (Wibberley 1970, p. 424).

In addition, the spatial element is only one of three components intimately concerned with the loss of agricultural land to non-food producing uses. The other two components are the agricultural quality of the land involved (Swinnerton 1974a) and the intrusion effects of these alternative land uses (Coleman 1969). A number of land budget studies have placed emphasis on the necessity of increasing output per acre while retaining a high level of economic efficiency. It is in relation to this requirement that the land quality factor has the greatest implication for the future food producing capabilities of agriculture (Swinnerton 1974a). Unfortunately, evidence suggests that a considerable amount of the land being taken out of agriculture, especially to accommodate urban expansion, is of this better quality (Crerar 1954, Gierman and Lenning 1980, Interdepartmental Task Force on Land Use Policy 1980, Warren and Rump 1981).

Compounding the impact on agricultural land from urban development and ancillary intensive forms of land use are two other pressures. First is the expanding role of rural areas in providing open space and opportunities for outdoor recreation. The second pressure is associated with the growing awareness of the amenity value of the countryside and concern over changes in the landscape resulting from modern agricultural practices (Bryant and Russwurm 1979, Davidson and Wibberley 1977, Phillips and Roberts 1973, Swinnerton 1974b, Troughton 1974). The overall effect of these pressures is essentially three-fold: first,

the physical transfer of land out of food production; second, the impact on agricultural land by external uses, even though the land is still being farmed, and finally, a questioning of the negative externalities resulting from certain agricultural practices which are being followed on the land remaining in food production. Most of these negative externalities are associated with modern farming practices directed towards increasing agricultural output from the land base. Examples include contamination by agricultural chemicals, the removal of natural habitats through land clearing and the drainage of wetlands, the trend towards monoculture, and the impact of these changes on the visual character and amenity value of the countryside (see Glasgow 1982, Green 1977, Leonard and Cobham 1977, Phillips and Roberts 1973, Sanderson 1981).

AGRICULTURAL LAND BUDGET IN ALBERTA

The limited number of studies that have examined future land needs for agriculture in Alberta have raised many of the issues that were addressed in the preceding section. Hu Harries and Associates (1974) in their examination of the future land needs for agriculture in Alberta provided an optimistic picture for cultivated crops largely based on a combination of improving the output on the existing area under cultivation and bringing potentially arable acres into crop production. The Alberta Land Use Forum (1976), based on the Hu Harries report, reached the conclusion that the agricultural land budget would be a positive one for food production until at least the end of the century. However, the Forum (1976, p. 168) noted that "it is prudent to provide as many options as possible in land use for following generations."

The most recent and comprehensive examination of the agricultural land budget for Alberta is the study undertaken by Peggy Thompson (1981b) in the Environment Council of Alberta report *The Agricultural Land Base in Alberta.* Thompson's review of the feasibility of meeting the demand for agricultural output in the future is more cautious in its conclusions than the studies previously mentioned. She points out that, although there are a number of options potentially available to meet these pressures, there are difficulties and limitations involved in their implementation.

In the context of the agricultural land budget of Alberta, reference has so far been restricted to the alternatives related to the resource base within agriculture itself. Another factor which is equally important is the non-agricultural uses of farmland and, specifically, the pressures resulting from an expanding population. Tangible evidence of this development may be found in the spread of the urban fabric, particularly in the Edmonton-Calgary corridor (Smith and Johnson 1978), and in the growing land requirements for transportation routes, resource extraction, and recreation. The fact that much of this urban development takes place, and will likely continue to take place, on high quality agricultural land aggravates the problem still further (Thompson 1981a, 1981b).

The overall conclusion reached by Thompson (1981b) is that many of these factors affecting the resource component of the agricultural land budget are probably not critical on an individual basis, but that cumulatively they could have serious repercussions on the future food producing capabilities of the province. Moreover, the fact that the greatest potential for future production lies within the existing agricultural area means that external pressure on the land base and other resources used in agriculture must be carefully controlled in order to ensure the viability of agricultural land use.

Consequently, an examination of the spatial demands of outdoor recreation on the rural landscape and the resulting social, environmental, and economic effects is an essential component of an appraisal of the agricultural land budget of Alberta.

THE INTERACTION BETWEEN RECREATION AND AGRICULTURE: AN INTRODUCTORY OVERVIEW

Despite the fact that over fifteen years ago Taylor (1965) identified the need for research into outdoor recreation on private land, few researchers have taken up that challenge. Ironside (1971) in reviewing the nature of the interface between agriculture and recreation a number of years later noted that little research on the problem had been undertaken in Canada. During the mid-1970s a limited number of studies were undertaken in Canada into the use of farmland for outdoor recreation. Most notable of these were reports by Braithwaite and Wright (1972), Ewanyk (1976), Klippenstein (1973), and Pattison (1973, 1974). Although the Canadian Council on Rural Development commissioned a number of studies into recreation development in rural areas (for example, Balmer and Cropo and Associates 1975, Canadian Council on Rural Development 1975a, 1975b, Graham 1975, Guertin 1975), few attempts have been made to produce an holistic appraisal of the situation at either the national or provincial level. More recently, a number of studies have examined specific types of outdoor recreation that tend to take place on agricultural land and the issues involved in the pursuit of these activities on private property (for example, Cullington 1980a, 1980b, Lee and Kreutzwiser 1980, Ross and Buckley 1977). In addition, Butler (1981) has provided an insight into the impact of recreation on rural Canada. There is, however, an extensive literature on the use of agricultural land for recreation in the United States (for example, Holececk and Westfall 1977, U.S. Department of Agriculture 1964, 1965, Vogeler 1977) and Britain (Burton 1966, Dartington Amenity Research Trust 1974, Frost 1977, Sayce 1980). A number of Canadian studies have used these sources as a basis for evaluating the potential opportunities and problems associated with the use of agricultural land for recreation in this country (Butler 1980, Cullington 1980a, Howard Paish and Associates Ltd. 1976, Ironside 1971, Troughton 1974).

STUDY OBJECTIVES AND FRAMEWORK

Study Objectives

It has been noted that the general purpose of this study is to examine the types and levels of interaction between recreation and agriculture in the Province of Alberta with particular reference to the effect of this impact on the potential productivity of the land base. More specifically, the objectives of the investigation are as follows:

1. To examine the patterns of use and demand for those types of recreation which affect the agricultural land base and/or the farming community.
2. To examine the characteristics of the agricultural land base in terms of its quality and potential for attracting and supporting recreational use.
3. To examine the significance and implications of the impact of recreation on agricultural productivity.
4. To examine the attitudes and ways in which landowners respond to the use of agricultural land for recreation.

5. To identify the major issues associated with the recreational use of agricultural land and to make recommendations where possible concerning future policy, planning, and research.

Framework for Analysis

Reference to existing studies suggests that the interaction between recreation and agriculture can have a number of different, though not mutually exclusive, implications for the potential productivity of the agricultural land base. For convenience, these implications may be considered as the outcome of four broad categories of involvement between recreation and agriculture:

1. The direct competition for agricultural land by both public and private recreational interests and the resultant long term if not permanent transfer of land out of food production.
2. The use of existing farmland for both consumptive (for example, hunting) and non-consumptive (for example, hiking and cross-country skiing) forms of outdoor recreation where there is little or no specific involvement by the landowner in commercially promoting the recreational use of farmland and where recreation is being superimposed on the existing agricultural use of the land in a multiple-use situation.
3. The recognition of the visual amenity (scenery/landscape) value of farmland as "green space" and the role of landowners in the promotion and retention of an attractive rural landscape.
4. The deliberate involvement by landowners in the promotion and operation of farm-based recreational activities on a commercial basis.

Study Outline

The initial chapter discusses the nature of outdoor recreation in Alberta. In Chapter II the prospects and limitations of recreation taking place on agricultural land are examined. Chapter III looks at recreation as a competitor for agricultural land and the subsequent chapter (Chapter IV) discusses the recreation-agriculture interface as a form of multiple use. In Chapter V the operation of farm-based recreational activities are described. The final chapter (Chapter VI) summarizes the main findings of the study.

Study Methodology

In accordance with the directives of the Environment Council of Alberta, the study is essentially a review of available literature and the subsequent synthesis and analysis of available information. As a result, no original field work and data collection have been undertaken.

In order to provide supplementary information for enabling a more accurate and perceptive interpretation and analysis of the existing literature, informal discussions were held with key persons representing the various interest groups associated with the recreation-agriculture interface. (The names of the people contacted are listed at the end of the study.) These informal discussions took the form of face-to-face meetings and/or telephone conversations.

With the limited amount of relevant published material relating to the recreational use of agricultural land in Alberta, the informal discussions with the recreational and agricultural interest groups provided a significant contribution to the information base for this study. However, because of the terms of reference of the study and the resultant methodology adopted, the study provides an indicative and exploratory overview rather than a representative analysis of the problem. Nevertheless, it is believed that the situations described and the issues identified can be assumed to be those aspects of outdoor recreation most relevant to the security of the agricultural land base in Alberta.

Finally, this report is intended to provide information to stimulate public discussion about the recreational use of agricultural land and the effect that this activity may have on the security of the agricultural land base. As a result, the material is presented in a descriptive and straightforward style in order to permit as wide a readership as possible and to encourage participation in the public hearings which the Environment Council of Alberta anticipates holding in due course into the maintenance and expansion of the agricultural land base in Alberta (Thompson 1981b).

CHAPTER 1

OUTDOOR RECREATION: AN OVERVIEW

The purpose of this chapter is to provide an overview of the pattern of outdoor recreation in Alberta. Particular attention is given to both the basic forces responsible for the increase in demand for this particular use of leisure time and the role that agricultural land plays as one component of the recreation resource base.

BASIC DEFINITIONS

Prior to examining the specific nature of outdoor recreation in Alberta, it is essential to define with greater clarity the way in which the terms "agricultural land" and "recreation" are being used in this report.

Agricultural Land

The terms "farm" and "agricultural land" are frequently used indiscriminately by many people, and the problem of definition becomes more complicated when the terms "rural" and "countryside" are introduced (see Troughton 1974, Davidson and Wibberley 1977). Thompson (1981b) has reviewed the confusion that exists and points to the need for a concise and accurate definition of agricultural land if an attempt is to be made to accurately record the amount of land used for agriculture. This need for clarification is even more acute if any attempt is to be made to delineate and monitor changes to the land-use structure of a specified area. A satisfactory solution to the problem is unlikely to be easily found because of different user requirements (Gierman 1981) and the proliferation of land-use classification systems and associated terminology already in use (see Scace 1981). It remains to be seen, for example, how effective the newly introduced program to monitor the changing agricultural land base in Alberta (Alberta Agriculture 1981) will be, bearing in mind the disparate sources from which the relevant data are being assembled.

For the purpose of this study a rather broad interpretation of agricultural land has been adopted. Many forms of outdoor recreation are extensive and ubiquitous users of the land base. As a result, it is extremely difficult to put precise and meaningful boundaries around areas being used for recreation if the area has not been specifically designated for this type of use. Furthermore, few recreation surveys in Alberta have collected data which identify the specific geographic location and land-use type on which the activity is taking place. For example, the province wide recreation surveys carried out by Alberta Recreation and Parks provide little indication of where the various recreation activities take place let alone whether they occur on agricultural land or not.

This study has therefore attempted to concentrate on the impact of recreation on land that is used for farming, the major component of the rural environment or countryside. However, because of the paucity of the data base available, some of the observations made in this study refer to the broader concept of rural or countryside as opposed to specifically the land used for agricultural production. It is suggested that this approach does not unduly undermine the value of the study because other researchers have also had to adopt this perspective.

The Canadian Council on Rural Development (1975a, p. 3), for example, provides the following interpretation:

The terms "rural" and "countryside" in this study refer to the agricultural regions of Canada as distinct from the primary forest and northern regions. Included within the productive agricultural regions are improved and unimproved pasture and croplands of all types, together with farm woodlots.

The Council in its interpretation of "rural" and "countryside" makes the observation that these areas may also include belts of forested landscape, small rural service communities and the fringe areas lying between the agricultural and forested regions. Butler (1981) adopts the same approach when he explains that "rural Canada" is the settled area of Canada beyond urban boundaries which mirror fairly closely the agricultural lands.

Applying these guidelines, this study is concerned with those areas of the province which coincide with the White and Yellow areas of the three general land-use areas (see Figure 1, and Alberta Energy and Natural Resources 1981a). The White Area is the settled part of Alberta and is considered to be the agricultural area of the province, whereas the Yellow Area is located in the Peace River district and is an area involving the agricultural frontier of the province. The Green Area consisting of the non-settled forested lands is not included in this study since, except for a small amount of grazing as part of the multiple use of some areas, it is not considered as part of the province's agricultural land base (Alberta Agriculture 1981).

Reference is therefore made in this study to recreation taking place on agricultural land occurring within the White or Yellow areas which is in private ownership or still held as public land. Most of the area of the public land being considered is used for livestock grazing under the disposition of a grazing lease or permit.

Recreation

Recreation is a complex concept meaning different things to different people. The fact that confusion continues to exist is demonstrated by the number of recent recreation texts and government reports which review the problem and attempt to define their own perspective on the issue (see, for example, Chubb and Chubb 1981, Godbey 1981, Gold 1980, Iso-Ahola 1980, Kando 1980, U.S. Department of the Interior 1979, Wall 1979). The general theme that is found in most of these references is the gradual transition from the traditional perspective of regarding recreation as an activity, which refreshed or restored the individual, to an acceptance of recreation as a particular type of human experience that finds its source in intrinsically rewarding voluntary engagement during non-obligated time (Driver and Tocher 1974). Gray and Greben (1974, p. 49) have gone as far as to suggest that recreation is "an emotional condition within an individual human being that flows from a feeling of well-being and self-satisfaction."

Acceptance of a specific definition of recreation is not critical to this report. What is important, however, is recognition of the fact that recreation cannot be defined solely in terms of a list of specific activities which are somehow inherently recreational (Godbey 1981). Clawson and Knetsch (1971, p. 6) have observed that "the distinguishing characteristic of recreation is not the activity itself but the attitude with which it is undertaken." In accepting

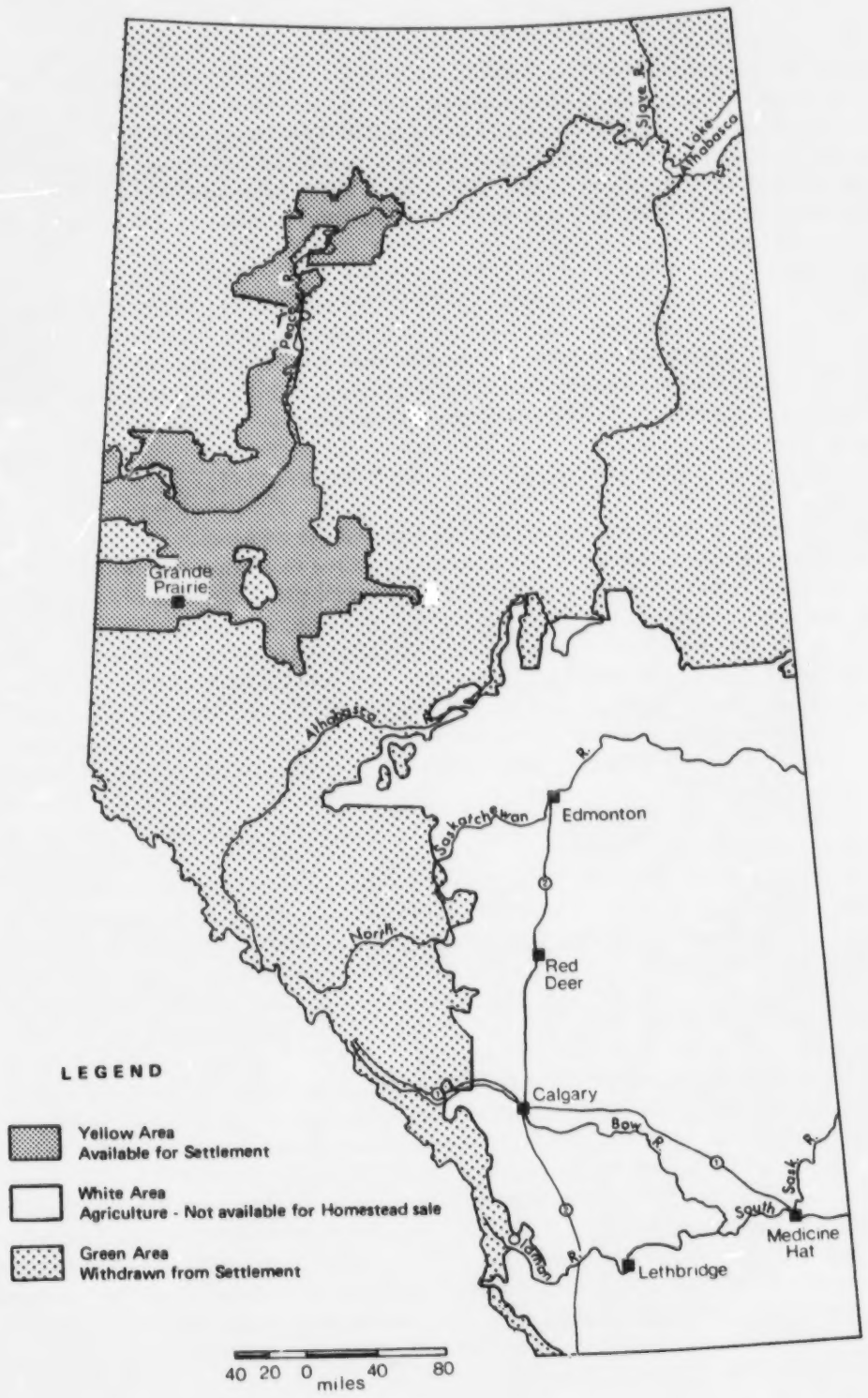


Figure 1. Alberta Public Lands General Classification Map

Source: Adapted from map produced by Public Lands Division, Alberta Energy and Natural Resources

a behavioural interpretation of recreation, attention is focussed on understanding the motivation which lies behind the engagement and the satisfaction and benefits that are derived from it, as well as on the observable activity itself (see Driver and Brown 1975). This behavioural approach is being applied to outdoor recreation resource planning and management in the United States (see Driver and Brown 1978, More and Buhyoff 1979) but unfortunately there is little evidence of its incorporation to date in recreation resource planning in Alberta.

In the context of this report, therefore, the term "recreation" is used to encompass any activity which is undertaken on a voluntary basis during leisure time for personal enjoyment and satisfaction and which takes place in an extra-urban or rural setting. However, although the term "activity" may be used in the text it is being applied in a manner which incorporates the behavioural concept of recreation as an experience.

THE OUTDOOR RECREATION SYSTEM

If an attempt is to be made to examine the recreational use of agricultural land, reference must first be made to the more general characteristics of the recreation system. The rationale for this approach is three-fold. In the first instance, very little data exists which deals with the types and amounts of recreation taking place on agricultural land. As a result, an assessment of this specific issue must be based largely on selective analysis of recreation demand and participation data which relate to the broader field of outdoor recreation. The second reason is that the area of outdoor recreation can be seen in the correct perspective only if it is placed in the context of the total leisure pattern. An important characteristic in this respect is that a major proportion of free time is spent within the home and its immediate environment, whereas "...less than one-fifth of all free time is given over to activities away from the city." (Burton 1976, p. 19). Moreover, only a proportion of that extra-urban engagement is likely to involve the use of agricultural land. The final reason for this initial broader perspective is associated with the recreation resource base or the supply side of the recreation system. Agricultural land is only one component of the potential resource base for outdoor recreation. Furthermore, the extent to which private agricultural land is used for outdoor recreation is in part a reflection of the relative absence or presence of alternatives/environments such as parks and other forms of public open space (see Butler 1981, Cullington 1980b).

An accepted format for examining the field of outdoor recreation is to consider it as a system involving demand and supply components which interact and which ultimately find expression in recreation activities and experiences. The conceptual framework that is being used in this report is largely based on one developed by Geoffrey Wall (1979) for the purposes of studying tourism and outdoor recreation. The diagrammatic representation of this framework is presented in Figure 2. An overview of recreation in Alberta will be presented using this basic framework. Attention is initially focussed on the demand factors relevant to outdoor recreation and the second phase involves an examination of the recreation resource base in Alberta. The final section outlines the predominant patterns of participation in outdoor recreation activities in the province with particular reference to those activities which probably involve the use of agricultural land.

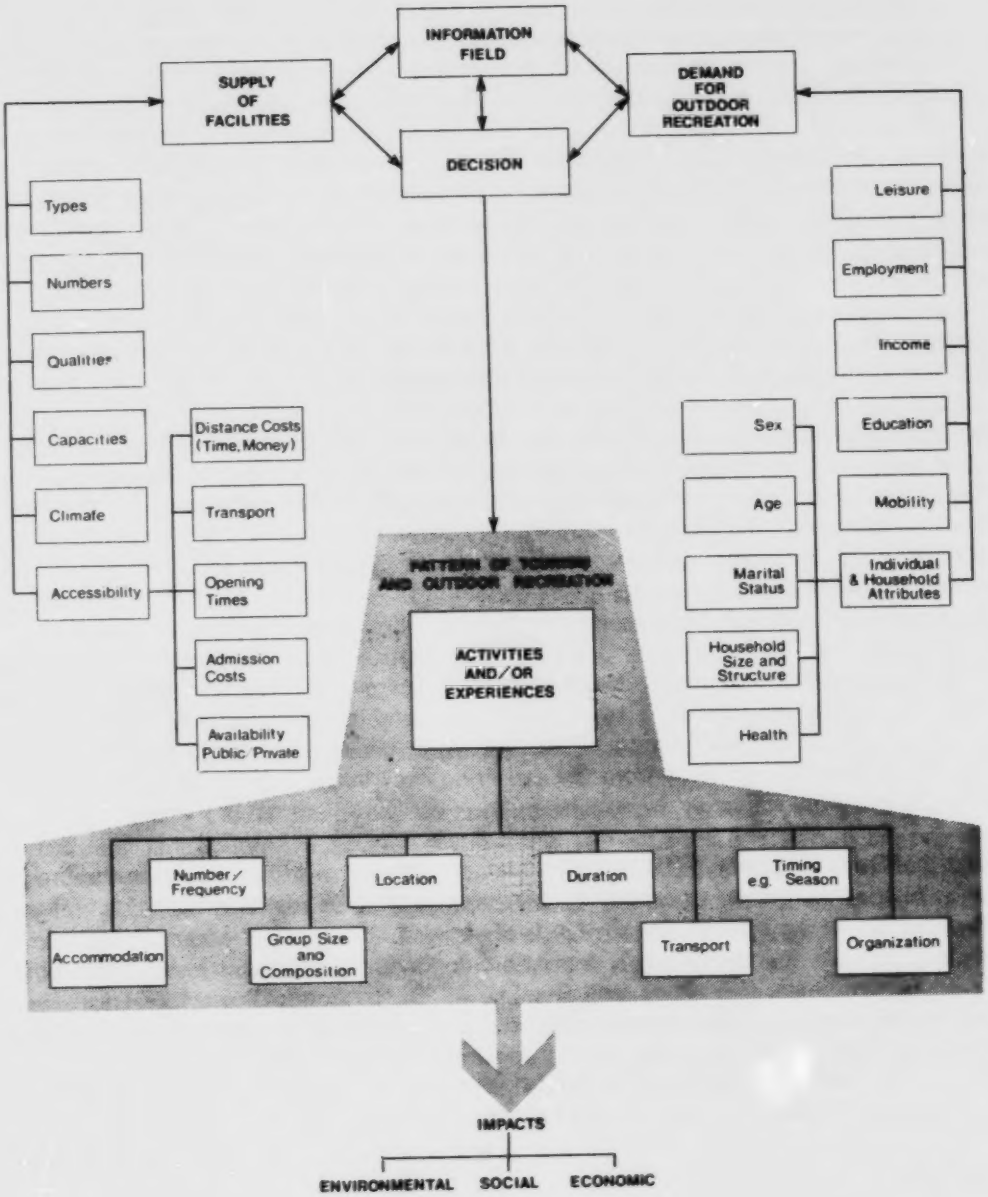


Figure 2. Theoretical Framework for Tourism and Outdoor Recreation

Source: Wall (1979, p. 6)

Recreation Demand

The Countryside Recreation Advisory Group (1970, p. 2) defines "demand" as "...the use of existing recreation facilities and the desire to use recreation facilities either now or in the future." However, demand consists of several components which are not always clearly differentiated. Particularly prevalent is the confusion that arises over the terms "demand" and "participation." "Effective demand" is the use of recreation opportunities and is synonymous with consumption or participation. "Latent demand" is a demand which is constrained or prevented from being effective by certain prevailing conditions which could be changed at some future point in time. Depending on the nature of these prevailing conditions, latent demand may in turn be described as deferred demand or potential demand. "Deferred demand" refers to a situation where the inhibiting factor is the lack of opportunity on account of the inadequacy of the resource or supply. "Potential demand" is that demand which will become effective at some future date largely on account of the changing circumstances of the potential consumer (Kenyon 1970).

Another aspect of demand is that of a demand hierarchy. The increasing acceptance of a behavioral approach to recreation planning and management which aims at satisfying recreation experience opportunities (Driver and Brown 1975) has led Driver and Brown (1978) to conceptualize a "recreation opportunity demand hierarchy." They (Driver and Brown 1978, p. 26) have separated recreation demand into four components on the basis of the specific types of opportunities that are demanded: (1) demands for recreation activities, such as to camp or to canoe; (2) demands for opportunities to experience those situational attributes of the physical, social, and management settings that characterize preferred recreation environments; (3) demands for opportunities to realize specific psychological outcomes that are desired from an activity opportunity and its associated preferred setting, such as taking risks or developing certain skills; and (4) demands for opportunities to realize the subsequent benefits that flow from the satisfying experiences such as improvement in mental health or family solidarity.

The point that Driver and Brown (1978) are making is that most outdoor recreation resource inventories restrict themselves to evaluating an area's capability in terms of level (1), whereas consideration should be given to all four levels of demand. A number of other authors have applied this concept in relation to a recreation opportunity spectrum extending from modern to primitive settings (Clark and Stankey 1979, Hoots and Buist 1980) and for investigating dispersed recreation experiences and the required resource settings (Haas, Allen and Manfredo 1979). The advantage of this demand hierarchy is that it permits a more flexible and yet more rigorous identification of the types of recreation environments that can provide opportunities for a wide range of recreation experiences.

Demand Factors

Wall (1979, p. 10) suggests that five major factors have been largely responsible in accounting for the demand for outdoor recreation. These are: available leisure, income, education, mobility, and individual and household attributes (including sex, age, marital status, household size and structure, and health). Attempts to explain and predict participation levels in outdoor recreation have frequently been based on these variables (see Peine, Marans and Harris 1980, Zuzenak 1978) and, although some deficiencies have been encountered (see Kelly 1980), the value of using these characteristics is widely accepted (Alberta Government

Recreation Committee 1978a, 1978b, Burton 1976, Conrad and Curran 1978, Hoole 1980, Kaiser and Moeller 1980, Reider 1980, Skydt 1980, U.S. Department of the Interior 1979). The Alberta Government Recreation Committee (1978a) has compiled a detailed assessment of many of the factors associated with recreation demand in Alberta. As a result, this section of the report will provide a summary of the more salient findings in that study but with the inclusion of more recent data where possible.

Population Characteristics An obvious determinant of recreation demand in any society is the size of the population. The larger the population the greater the demand. In 1901 Alberta's population was recorded as 73,022 whereas the province's population as of July 1, 1981 was estimated at 2,178,425 (Alberta Treasury 1981). The population growth rate in Alberta, particularly during the second half of the twentieth century, has been greater than that recorded in the rest of Canada. Between 1951 and 1976 Alberta's population grew at an annual average rate of 2.72 percent while Canada's as a whole increased at an average rate of 1.97 percent. The most recent statistics indicate that during the year ending March 31, 1981, the province's population grew by 81,650 or 3.92 percent which compares with a total growth of 70,700 or 3.51 percent a year ago. This increase in population growth was mainly due to an increase in net migration to the province.

Rapid growth in the Alberta economy is partly responsible for the growth rate through net immigration. Since the province's economy is expected to remain sufficiently active into the twenty-first century, the population is expected to continue to steadily increase for the next 35 years (Alberta Treasury 1979). Major developments in the oil and gas industry could lead to particularly substantial increases in the population through immigration (M. Hollinshead 1981: pers. comm.), although the number of migrants entering the province is dependent in part on the economic activities in Alberta relative to other parts of Canada.

Alberta Treasury (1979) has published two population projections for the province for the year 2006. The figures are 3,884,700 and 4,194,100 with the variation in the projections due to different assumptions in migration rates.* These figures mean that if the higher of the two alternatives proves to be the more accurate, the population of Alberta will virtually double (92.5 percent increase) before the end of the first decade of the twenty-first century. Although the absolute size of a population is important in determining the amount of recreation demand, other facets such as age structure, geographical distributions, and the rural-urban breakdown are also important.

***Population Projections**

Population Projection Series 4 Total Population 3,884,700 by 2006

Assumptions:

1. Fertility 2,109 births/thousand women of childbearing age
2. Migration 38,000 in 1977-78 rising to 56,000 in 1982-83, tending to level off at 34,000 in 1986-87

Population Projection Series 5 Total Population 4,196,100 in 2006

Assumptions:

1. Fertility 2,109 births/thousand women of childbearing age
2. Migration 38,500 in 1977-78 rising to 47,300 in 1987-88 and levelling off at 47,300

Apparently, even Series 5 projections were approximately 3 percent below the 1981 census figure recorded by Alberta. Statistics Canada has used a population projection model similar to that used in Series 5 population projections.

Age is correlated with many factors that influence recreation demand and participation including physical stamina, social independence of the recreationist, career and income development, and leisure time available (Hendee, Gale and Cotton 1971, Zuzenak 1978). Evidence from existing studies shows that participation rates for the majority of outdoor recreation activities declines with age (U.S. Department of the Interior 1979). Consequently, with the long range shift to an older population in many advanced industrialized countries such as the United States (U.S. Department of the Interior 1979) and Canada (Adler and Brusegard 1980) important changes in recreation demand could ensue (Marcin and Lime 1977). However, Kaiser and Moeller (1980) point out that the traditional pattern of a negative correlation between age and recreation participation may be off-set in part by society's changing perception of the elderly and, more importantly, the way older people see themselves. This trend towards continuing involvement in outdoor recreation through the life cycle could have important implications for the planning and management of recreation environments in the future (see Christie 1981).

Although the age structure in Alberta is not markedly different from the Canadian one there are some differences. The proportion of adults is below the mean while the proportion of children and aged is slightly above it. Furthermore, the trend towards a maturing population which is evident for Canada as a whole is partially diluted in the Alberta context due to the age structure of migrants entering the province. In comparison with the age structure of the province's total population in 1976, the assumed age structure of migrants for the period 1977 to 2006 has a distinct bias towards the 20-24 age group and to a slightly lesser extent to the 25-29 age group (Alberta Treasury 1979). The effect of this immigration pattern on the demand for outdoor recreation is two-fold. In the first instance there is the immediate impact of a potentially active age group on the recreation resource base and, secondly, there is the longer term effect of a continued expansion of the population through natural increase because of the number of female immigrants falling within the childbearing age group.

The geographical distribution of the population is shown in Figure 3 and clearly illustrates the importance of the Edmonton-Calgary corridor with the two cities of Calgary and Edmonton accounting for half of the province's population (see Alberta Advanced Education and Manpower 1980, Smith and Johnson 1978). Despite the continued growth of these two metropolitan areas and smaller urban central places throughout the province, a distinctive feature of Alberta's population growth pattern during the 1970s has been the increase in population in rural areas. This feature is particularly evident in relation to small towns located in relatively close proximity to major centres such as Edmonton or Calgary (Haigh 1978, Smith and Johnson 1978) and in those rural municipalities where rural subdivisions have become a distinctive urban intrusion into an otherwise rural landscape (see Moncrieff and Phillips 1972, Thompson 1981a). The effect of these population trends is that although urban areas continued to grow, rural areas also increased in population, reversing the traditional downward trend (Hornbrook 1981).

Nevertheless, Alberta has experienced during this century not only the expansion of the urban sector of the population at the expense of the rural component, but even more marked is the decrease in the farm population. In 1901, 83.8 percent of the province's population was classified as rural with the balance of 16.2 percent being identified as urban.

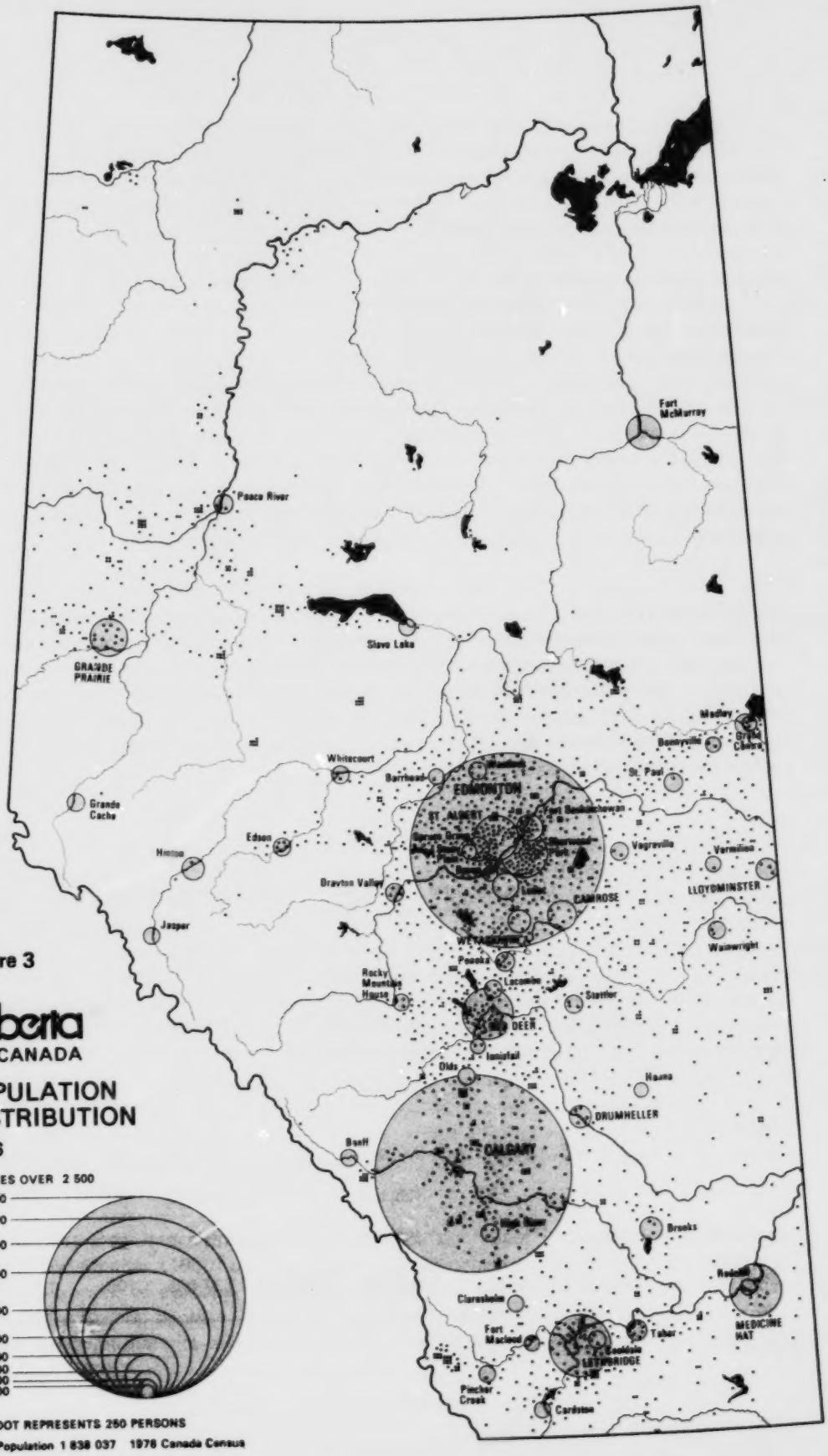


Figure 3

Alberta
CANADA

POPULATION DISTRIBUTION

1976

CENTRES OVER 2 500

500 000
400 000
300 000
200 000
100 000
50 000
25 000
10 000
5 000
2 500

ONE DOT REPRESENTS 250 PERSONS

Total Population 1 838 037 1976 Canada Census

By 1951, the corresponding figures were 54.2 percent and 45.8 percent respectively. The latest year for which figures are available (1976) indicates the urban supremacy with 75.0 percent of the population being classified as urban and 25.0 percent being recorded as rural (Alberta Economic Development 1980).

Although farm population data as a separate rural category is unavailable for the period prior to 1931, a marked decline in this sector of the rural population is evident from those figures that are available. In 1931, the farm population accounted for 51.3 percent of the total population but within twenty years (1951) it had declined to 36.7 percent of the province's total population (Hu Harries and Associates Ltd. 1974). Within a further twenty-five years (1976) only 10 percent of Alberta's population lived on farms (Smith and Johnson 1978). An overview of the changing urban-rural distribution of the province for the period 1961 to 1976 is presented as Table 1. The significant decline in the farm population between 1961 and 1976 contrasts with the non-farm sector of the rural population which increased its numbers in absolute terms and regained its accountability for 15 percent of the province's population.

There are a number of implications resulting from the geographical distribution of the population and the rural-urban breakdown which are particularly relevant to the use of agricultural land for recreation. The concentration of much of the province's population into a number of major urban centres implies that the escapism at weekends to the surrounding rural areas which form urban recreation hinterlands (see Barker 1978, Butler 1981, Greer and Wall 1979, Mercer 1970) is not only likely to continue but will increase in intensity. This will put further recreation pressure on an area which is already experiencing some conflict between the farmer and the recreationist.

TABLE 1

Urban and rural population distribution in Alberta at five year intervals, 1961-1976

	1961		1966		1971		1976	
	Number	%	Number	%	Number	%	Number	%
URBAN	843,211	63	1,007,407	69	1,196,250	73	1,379,165	75
RURAL								
Farm	285,823	22	277,598	19	236,025	15	189,650	10
Non-farm	202,910	15	178,198	12	195,590	12	269,225	15
Total Rural	488,733	37	455,796	31	431,615	27	458,875	25
ALBERTA	1,331,944	100	1,463,203	100	1,627,865	100	1,838,040	100

Source: Smith and Johnson (1978, p. 67).

A more widespread problem is associated with the decline in the number of people living on farms and the growth of the urban population. Whereas in the past a substantial proportion of the population could use their own farmland or that of their friends for recreation (see Pattison 1974), this opportunity is being eroded through the increasing proportion of the population living in towns and cities. As this "break with the land" becomes more entrenched over time and is compounded by the migration of large numbers of people into the province who will largely settle in the urban centres and who will have no personal attachment to the land base in Alberta, conflict between the urban recreationist and the farmer is likely to increase. This conflict arises in part out of the urban population's lack of knowledge of agricultural practices, behaviour norms in the countryside and farmers' attitudes to private land, and in part out of the landowner's lack of appreciation of the recreational needs of the urban dweller (see Fairbrother 1972). There is also the factor that with the need of newcomers to an area to search for new and alternative recreation settings (see Elson 1976), they may unintentionally trespass on private land. In addition, the sense of community and a "sense of place" which frequently act as an informal policing power are further diluted by the high mobility of the population within the province. It is estimated, for example, that approximately 30 percent of Albertans have not lived in the same municipality for five years (Alberta Recreation Committee 1978a).

Discretionary Time A second major factor which influences recreation demand and participation is the amount of unobligated or leisure time an individual has at his/her disposal. Numerous factors such as age, sex, marital status, family life cycle and employment status influence the total amount of discretionary time available and the timing and length or blocks of individual periods of leisure time (Clawson and Knetsch 1971, Zuzenak 1978). Although increases in available leisure time do not correlate directly with increased recreation participation, the relationship is predominantly a positive one (U.S. Department of the Interior 1979).

Dyck (1970) has examined the changing availability of discretionary time in Alberta and the relevant table is presented as Table 2. Even though some of the specific figures may be open to question, the general trend towards Albertans having more discretionary time is generally accepted. The Alberta Government Recreation Committee (1978, p. 191) has noted that "Albertans will undoubtedly have a shorter work week in the future and it is anticipated that this will be a result of working fewer hours per week or days per year (for example, longer paid vacations), rather than less hours per day." Evidence from the United States reveals that it is during these more numerous extended periods of free time that an increase in participation in outdoor recreation activities is likely to occur (U.S. Department of the Interior 1979). There is also the pattern of flexible work scheduling which frees more daylight hours for recreation on a daily basis during the conventional working week. Other factors that contribute to the growing fund of leisure time include technological innovations within and outside the home, the increased acceptance of convenience foods and the trend towards fewer children.

Despite the fact that many projections advocate a continued increase in discretionary time, Kaiser and Moeller (1980) caution that North American society may be approaching a peak in the amount of available discretionary time and that leisure time may in fact start to decline. Nevertheless, because of the changing work ethic, discretionary time and associated leisure accomplishments will become an increasingly important measure of personal success (Reidel 1980).

TABLE 2

Mean estimates of time spent working and vacationing by occupational categories, 1975-2005

CATEGORIES	1975	1980	1990	2005
Length of Work Day (in hours)				
Professional-Managerial	7.9	7.6	6.8	6.3
White Collar	6.9	6.9	5.6	5.0
Skilled Labour	7.0	5.7	5.4	5.0
Unskilled Labour	7.4	6.9	5.5	5.1
Length of Work Week (in hours)				
Professional-Managerial	40	38	33	31
White Collar	34	28	26	24
Skilled Labour	34	28	25	22
Unskilled Labour	37	34	27	24
Annual Vacation (in weeks)				
Professional-Managerial	4.3	5.1	6.2	7.7
White Collar	3.8	4.5	5.5	7.5
Skilled Labour	3.5	4.5	5.8	7.8
Unskilled Labour	3.0	3.7	4.9	5.8
Average Age of Entry into The Labour Force				
Professional-Managerial	26	27	28	28
White Collar	21	22	23	24
Skilled Labour	21	21	22	22
Unskilled Labour	18	18	19	24
Average Age of Retirement				
Professional-Managerial	63	60	57	53
White Collar	62	59	56	53
Skilled Labour	61	58	55	52
Unskilled Labour	62	59	57	55
Rate of Unemployment	9.2%	10.0%	18.4%	32.7%

The table above summarizes data pertaining to the availability of leisure time by occupational categories. The occupational categories presented here may also be interpreted as social class indicators. This table is based on the assumption that the current concept of "leisure time," as distinct from "work time," will prevail.

Source: Dyck (1970, p. 102).

Education Three measures of social stratification are frequently used to explain and predict levels of participation in recreation: educational level, income level and level of occupational prestige. Of these three, the educational level has been found to be the most important independent predictor (Zuzanek 1978). Zuzanek (1978) has observed that for most leisure and recreational activities there is an almost direct relationship between growing levels of education and rates of participation. Godbey (1980) has explained this relationship on the basis that education not only stimulates interest in many forms of leisure activity but also provides some of the necessary skills for enabling and enjoying participation. Evidence suggests that persons with higher levels of education are more likely to participate in most forms of outdoor recreation and tourism (Godbey 1980, Jackson 1980). They are also more likely to prefer non-consumptive or "appreciative symbolic" forms of recreation such as hiking, wilderness camping, photography, and nature study as opposed to the consumptive or "extractic symbolic" activities which would include hunting and fishing (Hendee, Gale and Cotton 1971).

Applying these relationships to Alberta, there is every likelihood that there will be increasing demands for outdoor recreation opportunities in the province due in part to the growing enrolment in institutions of post-secondary education. The move towards making higher education more widely accessible to all Albertans commenced in the latter half of the 1950s (Berghofer and Vladicka 1980). Since then, enrolment in Alberta's public post-secondary institutions has increased substantially and during the 1978-79 period these institutions served more than 240,000 people through a variety of further education programs (Alberta Economic Development 1980). Although university enrolment declined towards the end of the 1970s this trend has been more than compensated for by growth in other types of post-secondary education. The positive association between further education and involvement in outdoor recreation is likely to be expressed for at least the remainder of this century.

Economic Characteristics Two of the economic measures which are traditionally examined in relation to their effect on recreation demand and participation are the gross domestic product and real disposable income.

It has been suggested that despite the lull in the economy during the recent energy disagreement between the Federal Government and the Provincial Government, the long term economic performance of Alberta in comparison with the other provinces will remain better than average (InnTrec Group Ltd. 1981). Indicative of this favourable position is the fact that Alberta's share of Canada's gross domestic product in current dollars increased from 8.8 percent in 1973 to an estimated 13.3 percent in 1979 (Alberta Treasury 1980). Over the same period the gross domestic product recorded for Alberta on a per capita basis increased from $6,554 to $17,633.

One of the recreation implications of this economic prosperity is that more people from other parts of Canada seek employment within the province, thus potentially increasing the demand for recreation opportunities. On the other hand, with the increase in government revenue there will be a larger source of funds from which government may invest in recreation services (Alberta Government Recreation Committee 1978a). The application of the money from the Alberta Heritage Savings Trust Fund to the recently announced Urban Parks Program (Alberta Recreation and Parks 1981a) and the Recreation Areas Program (Alberta Recreation and Parks 1981b), as well as to more extensive developments such as Kananaskis Country, is indicative of this government response.

An economic measure which is more directly applicable to recreation demand is real personal income and, more specifically, the amount of real personal disposable income. Reference is made in the *Third Nationwide Outdoor Recreation Plan* for the United States (U.S. Department of the Interior 1979, p. 35) that not only does spending on recreation pursuits increase with more disposable income, but that most people use more of their available discretionary income on recreation. This spending in the recreation sector is seen in the purchase of equipment, services, and recreation travel.

In the six year period 1971 to 1977 personal disposable income per capita in Canada rose by 115 percent and, although the Consumer Price Index rose by 60.8 percent, a major increase in real income and probably discretionary income resulted (Statistics Canada 1979). Figures for Alberta illustrate that during the period 1973 to 1979 personal disposable income per person more than doubled as it rose from $3,627 to $7,832. There is every likelihood that a proportion of this increase would have been allocated to expenditures on travel and recreation.

Although individual spending power in Alberta has increased relative to the national average, inflation and the rising costs of living are likely to continue eroding the purchasing power of disposable income. Phillips, Jenkins and De Pape (1976) have examined the implications of inflation through the concept of threshold costs. Threshold costs are costs that participants must meet in order to engage in a particular type of recreation activity at a specific site. Entry fees, transportation, equipment, food and lodging are examples of such threshold costs and can obviously vary depending on the nature of the recreation activity, the location of the recreation area in terms of distance from the home of the participant, and the time spent away from home.

One way of compensating for the increase in threshold costs is through substituting those activities with high threshold costs with those that exhibit a lower cost. This substitution could result in a swing towards activities that are less dependent on expensive outdoor equipment and/or in a change of location of the recreation engagement in order to cut down travel costs. An important consideration here is the extent to which different recreational activities and/or recreational settings are adequate or preferred substitutes for the current pattern of engagement (see Hendee and Burdge 1974). A possible outcome from choosing either of these alternatives could be to put considerably more pressure on the resource base, much of which is in agricultural use, within the convenient recreation-hinterland of the major centres of population within the province (see Hoole 1980).

An alternative scenario is where consumer anticipation of continued inflation may lead to the accelerated purchase of durable recreation items which are frequently used in connection with resource oriented outdoor recreation activities. Which of these two alternatives is likely to predominate is difficult to ascertain (Phillips, Jenkins and De Pape 1976).

Mobility The spatial patterns of recreation activity in Canada have been based to a large extent on a high degree of personal mobility through the ownership of the private automobile and a plentiful supply of inexpensive energy, including gasoline. The significance of car ownership to patterns of recreation participation reveals itself both in the number of recreation pursuits that are intimately connected, and in some instances predetermined, by car ownership as well as in the flexibility of where and when these recreation activities take place.

A measure of this mobility factor is provided by statistics on automobile ownership. During the twenty year period 1960 to 1980 the percentage of Canadian households owning one or more automobiles increased from 66.5 percent to 79.8 percent (Butler 1981). Figures available for Alberta show that over the period 1969 to 1979 the number of registered automobiles (passenger cars) grew from 482,375 to 949,233, an increase of 96.8 percent (Alberta Treasury 1980). Undoubtedly a proportion of this increase is accounted for by the growth in the province's population over this period. However, a clear indication that Alberta's population has become potentially more mobile is the fact that, whereas in 1969 there were 309.4 passenger cars for every 1000 people in the province, this ratio had reached 471.6 per 1000 by 1979, an increase of 52.4 percent.

Ownership of a vehicle is only one factor which influences the mobility level of an individual or family. Of increasing importance is the cost of operating the vehicle for both essential and discretionary uses. The increasing cost of energy, particularly in the form of gasoline prices, influences the threshold costs of many types of outdoor recreation. This impact is evident when travel is an important component of the recreation experience.

Not surprisingly, with the substantial increases in gasoline prices and the uncertainty of supply which became particularly evident in the latter part of the 1970s, a number of studies have examined the way in which recreationists have responded to these developments (Colton 1979, Corsi and Harvey 1980, Foster 1981, McCool 1980, Ritchie and Claxton 1981). The conclusions of these and other studies are inconclusive because of the limited state of knowledge on the issue (see McCool 1980). However it is possible to point to some of the options that are available.

Gasoline consumption is only one component of energy use associated with a recreation activity. Ritchie and Claxton (1981, p. 13) have suggested that the energy requirements of a recreation activity need to be measured along four dimensions of consumption: (1) direct energy consumption necessitated by participation in the activity; (2) indirect energy consumption associated with the production of the equipment and products required for participation; (3) maintenance consumption of energy required to maintain equipment and facilities; and (4) travel consumption of energy involved in the travel to the site where the activity is to take place. Foster (1981) has used a similar framework for examining the impact of energy price changes on leisure activities on Vancouver Island. The relative importance of each of these four dimensions clearly varies depending on the specific type of recreation activity, the nature and level of participation, and the travel distance involved.

Corsi and Harvey (1980, p. 59) have suggested that there are four broad categories of adjustment patterns in vacation/recreation travel that may be made in response to changes in the price and availability of gasoline. They are: (1) activity space reduction; (2) activity mode change; (3) activity frequency reduction; and (4) activity type change. They suggest that the most significant adjustment would be in relation to the activity space component so that a tendency to travel shorter distances to recreation areas would emphasize the importance of regional and local destinations at the expense of more distant resource areas of national significance. Van Doren (1980) is supportive of this view in stressing the probable increased use of recreation sites near residential areas. Any adjustment in the mode of transport is likely to be limited because of people's reluctance to forego the convenience

and comfort of the private automobile in relation to public transport. However, the utilization of smaller vehicles including recreation vehicles could be one form of compromise (IBI Group 1979). The reduction in the frequency of trips is likely to be another adjustment to gasoline price increases (Corsi and Harvey 1980) as well as attempts to maximize the ability of trips through integrating recreation with other travel objectives. The fourth alternative is activity substitution.

Changes in the price and availability of gasoline are an issue that must be addressed in considering the potential expansion of tourism in Alberta. Two studies undertaken on behalf of Travel Alberta in connection with the tourism potential of southeastern Alberta (IBI Group 1979) and West Central Alberta (InnTrec Group Ltd. 1981) address some of these issues in the Alberta context. The InnTrec Group (1981) study suggests that although fuel shortages are unlikely in Alberta over the next 20 years, should such a situation arise a response would likely take the form of trips of shorter distances and the saving of fuel for recreation travel. The reaction to fuel price increases is seen as involving the utilization of smaller vehicles, less use of large trailers, shorter distances travelled, less touring and more destination travel, and use of other modes of travel and an increased use of fly/drive packages (InnTrec Group Ltd. 1981, p. B-140). Similar conclusions were reached by the IBI Group (1979) but with the important observation that fuel shortages as opposed to increased fuel prices have a much more immediate effect through the decline in recreation travel and away-from-home activities.

Overall, however, it would appear that there is a range of adjustments that can be made in response to the energy crisis. Critical issues associated with these choices are the uncertainty of the nature of the elasticity of demand for gasoline over the long and short term (McCool 1980) and the varying sensitivity of different income groups to gasoline price increases (see Fitton 1978). Another difficulty in evaluating the situation in Alberta is the question of how relevant are adjustments noted in the United States (Corsi and Harvey 1980), Britain (Fitton 1978) or indeed other parts of Canada (Foster 1981) to Alberta.

Summary of Demand The review of the more important factors that influence the demand for recreation clearly shows that, with few exceptions, the trend is clearly a positive one for recreation in general and outdoor recreation in particular. Reference has not been made, however, to the interaction of these factors and the resulting broader concept of changing lifestyles which may well bring a new awareness for environmental quality as well as an increasing commitment to fitness through a variety of recreation activities. The growing participation of women in a variety of outdoor recreation activities is indicative of another pattern of demand, the significance of which may become more widespread in the future (Reidel 1980).

Kaiser and Moeller (1980) nevertheless have cautioned against a too simplistic application of the traditional indicators of recreation demand - population growth, leisure time, income and mobility, which were relevant during the 1960s and 1970s, to the 1980s. They (Kaiser and Moeller 1980, p. 31) conclude that in the context of the United States, "the eighties may demonstrate how really important recreation participation is to the American public – as shown by how willing people are to pay for a higher proportion of costs in relation to other demands on their increasingly scarce financial resources." Certainly one factor which will influence levels of participation is the availability of resources for outdoor recreation.

Recreation Supply

The introductory discussion on recreation demand recognized the important distinction between demand and effective demand or participation. This distinction recognizes that whereas demand may be independent of supply, participation or consumption is determined by both demand and the availability of supply. Both Knetsch (1974) and the Outdoor Recreation Sector Group in Canada (1975) have stressed the important function that the availability of recreation opportunities has in both leading to the creation of demand and more particularly in influencing the rates of participation. Unfortunately, the discussion of recreation supply is also plagued by the use of imprecise terminology. Clarification of some of the more critical terms is therefore essential. An indication of recreation supply is usually interpreted as an inventory of recreation resources involving the "natural or man-made feature(s) which provides, or may provide in the future, opportunities for recreation." (Countryside Recreation Research Advisory Group 1970, p. 8). The Advisory Group (1970, p. 8) elaborates on this definition by indicating that "features only become 'recreation resources' when man desires to make use of them for recreation. A resource becomes a facility when developed for recreation use."

There is also the important distinction between the concepts of supply and opportunity. Supply is an absolute measure which refers to an inventory of recreation resources in terms of type, distribution, quality and other characteristics (see Figure 2). Opportunity, however, is a relative measure which is a demand related concept and which expresses effective supply. As a result, the same recreation resource or facility offers different levels of recreation opportunity to different sectors of the population.

Factors which influence different levels of opportunity include the spatial relationships between the resource and the potential user population, the ease and convenience of overcoming that distance barrier, the threshold costs involved in using the resource, on-site accessibility, and the different amounts of discretionary time available to potential users to use the resource (see Burton 1976).

Another conceptual problem associated with the recreation supply component of the outdoor recreation system is determining what is a recreation resource. The traditional approach towards resource classification defined resources as tangible elements of the bio-physical environment necessary for the production of certain basic commodities. Unfortunately, a number of misconceptions regarding the nature of resources developed out of this perspective. The most notable of these misconceptions included the belief that resources were tangible components of the environment, that they were single purpose and that they were static in value over time (O'Riordan 1971). More recently, it is becoming widely recognized that resources are more accurately described as a culturally defined concept which reflects a functional relationship between man and his environment and which focusses on man's wants, abilities and appraisal of his environment (O'Riordan 1971). Clawson and Knetsch (1971, p. 7) adopt this perspective when they explain the concept of a recreation resource in the following manner:

> *There is nothing in the physical landscape or features of any particular piece of land or body of water that makes it a recreation resource; it is the combination of the natural qualities and the ability and desire of man to use it, that makes a resource out of what otherwise may be a more or less meaningless combination of rocks, soil and trees.*

The application of this cultural concept of resources to outdoor recreation has a number of important implications. In the first instance, there is the need to appreciate that a recreation resource changes through space and over time. The concept of a resource is therefore a dynamic one. A second implication is that different potential user groups perceive the same components of the bio-physical environment in different ways and assign to the components different levels of utility. The outcome is competition and potential conflict between resource interest groups such as between recreation interests and forestry and/or farming interests. There is also the possibility of conflict within a major user or interest group as might occur between the hiker and the off-road vehicle driver even though both may be seeking a recreation experience in the same area. Another implication is the potential conflict between culture groups as differentiated between the indigenous population in an area and the visitor or tourist. Finally, there are the different perceptions of resource use and management requirements when expressed by, for example, park staff or provider as opposed to the view of the user or visitor.

The changing concept of resources is not solely restricted to the biocultural approach and the dynamics inherent in the perspective. Equally important has been the broadening of the concept of resources to include consideration of more than simply the production of commodities evaluated in economic terms. This broader perception of natural resources involves the notion of amenity resources which include the quality of the environment, landscape aesthetics, non-consumptive wildlife values, and the character of open space (Perloff 1969). Although both the traditional commodity resources and the newer environmental or amenity resources provide services to the consumer, the latter is much more subject to externalities. Many of the effects being generated are brought about by changes in the production procedures followed by the traditional commodity resource users.

Having examined a number of basic concepts relevant to recreation resources, the recreation supply system in Alberta and the factors that influence its availability are discussed.

Supply Factors

The availability of the resource base for outdoor recreation is more complicated than simply providing an inventory of the characteristics of the bio-physical and/or cultural resource base. Although the physical or cultural environments largely dictate the absolute level of supply, numerous other factors determine whether or not resources can be used for recreational purposes (Cox 1972, Pigram 1976). Since the present study is concerned with the recreational use of agricultural land, consideration will be restricted to those factors which influence the availability of land and water for outdoor recreation. Irland and Rumpf (1980) have suggested that in order to evaluate the availability of the resource base for recreation, consideration needs to be given to five variables: (1) physical characteristics of the resource base; (2) ownership; (3) management policies of the owners; (4) requirements of the activity; and (5) accessibility. The approach adopted is to apply these and other relevant factors at the provincial level in order to provide the context for examining the role that agricultural land plays as a component of the recreation open space system.

The Recreation Resource Base The considerable diversity of the bio-physical resource base of the Province of Alberta has been described (see Hardy 1967) and utilized in promoting the recreation and tourism potential of the province (Travel Alberta 1980a). Since the

bio-physical components of the resource base are important factors in influencing the types of recreation opportunities in an area (Simpson-Lewis *et al.* 1979) an inventory of their characteristics and distribution is important for recreation planning. Alberta Recreation and Parks (1979) has divided the province into five Natural Regions and 17 Natural Sections for describing and evaluating the distribution and variety of wildland and other resource based recreation and interpretation opportunities. The distribution of the five Regions - Grassland, Parkland, Foothills, Boreal Forest and Rocky Mountain is shown in Figure 4. This approach provides a descriptive base for indicating the diversity of the physiography of the province but it gives little indication of the province's recreation potential.

Numerous classification systems have been developed to evaluate recreation resources (see Chubb and Chubb 1981) but reference will be made to only two approaches at this point. In the late 1950s, Marion Clawson (Clawson and Knetsch 1971) proposed a three-class system of recreation resources which is summarized in Table 3. One of the main attributes of the approach is that it recognizes the importance of location in evaluating recreation opportunities as opposed to simply supply. Reference will be made later to this classification in the context of the spatial pattern of recreation participation on agricultural land.

The only inventory of the recreation resource base of the province is that provided by the land capability classification for outdoor recreation which was undertaken as part of the Canada Land Inventory program. The main objective of the recreation land capability classification was to "provide a reliable and authentic overview of the quality, quantity, and distribution of natural recreation resources within the settled parts of Canada" (Canada Department of Regional Economic Expansion 1969, p. 3). The basis of the classification is the quantity of recreation land use which may be generated and sustained per unit area of land per year under perfect market conditions without undue degradation of the resource. Land (including cultural features) is graded into seven classes and there are 25 sub-classes which indicate the kinds of features which provide opportunity for recreation. The degree to which these features are judged capable collectively of generating and sustaining use for recreation determines the class. A description of the seven classes is provided in Table 4.

The Canada Land Inventory has been critically examined on a number of occasions (see Dooling 1977, Rees 1977). One of the major deficiencies of the classification is the failure to distinguish between the quality of the recreation feature and the capacity or quantity of use the area can sustain. As a result, areas which cannot support high levels of use are assigned a low rating. Another significant limitation is that the classification is based on the concept of supply and not opportunity. As a result no account is taken of the relative advantage of an area due to its location.

Taylor (1978) has provided a summary of the distribution of the seven capability classes for all of Canada. The relevant statistics for Alberta and Canada are presented in Table 5. It is important to remember that only the settled parts of Canada were mapped. As a result, the northern part of Alberta was not mapped as part of the Canada Land Inventory program. However, the area was subsequently evaluated under the Alberta Land Inventory program. The mapping and evaluative procedures used were identical to the Canada Land Inventory System but unfortunately the resultant data have not been compiled in a tabulated format (J. Smith 1981: pers. comm.).

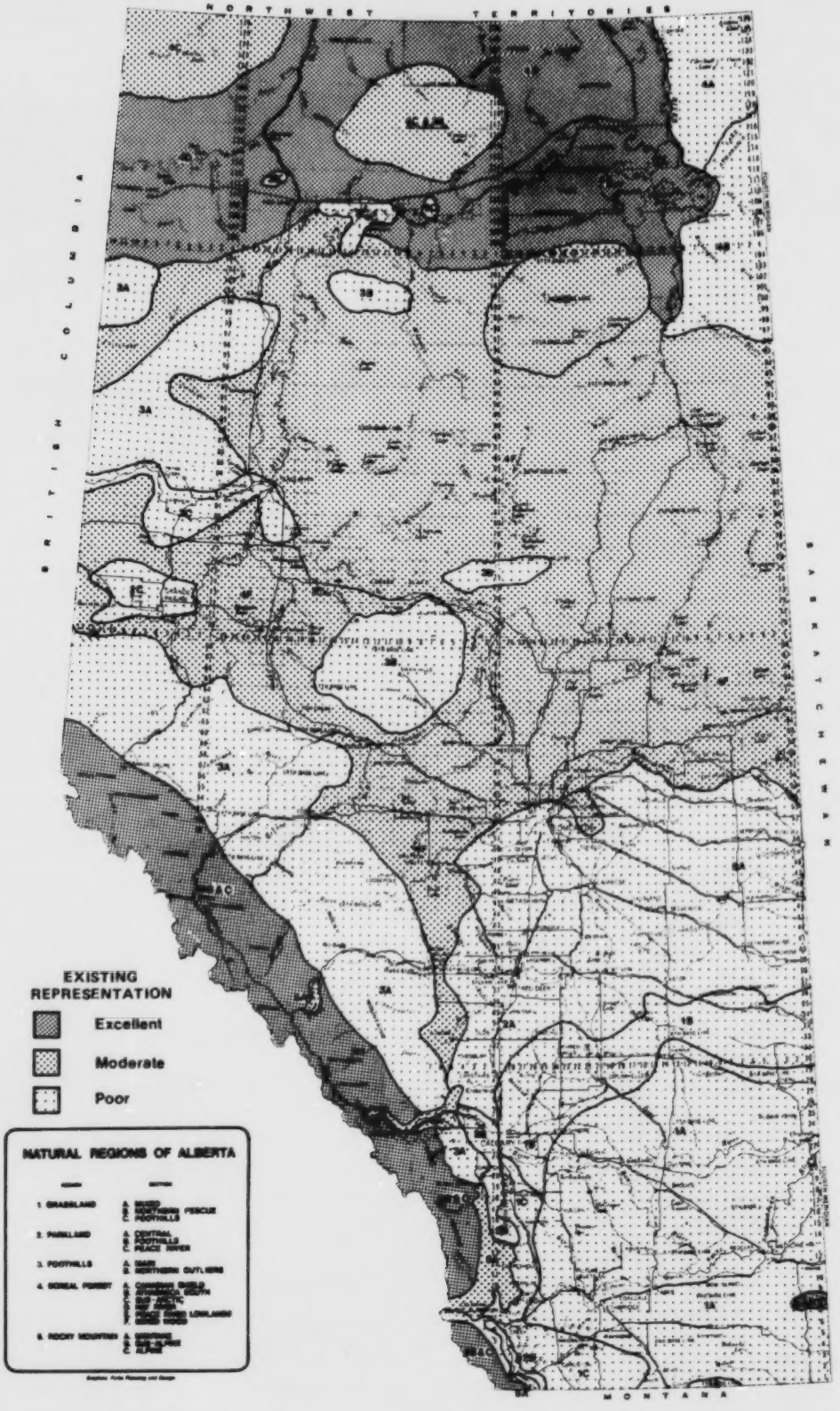


Figure 4. Natural Regions of Alberta, Existing Representation

TABLE 3

General classification of outdoor recreation uses and resources

Item	Type of recreation area		
	User oriented	Resource based	Intermediate
1. General location	Close to users; on whatever resources are available.	Where outstanding resources can be found; may be distant from most users.	Must not be too remote from users; on best resources available within distance limitation.
2. Major types of activity	Games, such as golf and tennis, swimming; picnicking, walks and horse riding; zoos, etc. playing by children.	Major sightseeing; scientific and historical interest, hiking and mountain climbing, camping, fishing and hunting.	Camping, picnicking, hiking, swimming, hunting, fishing.
3. When major use occurs	After hours (school or work).	Vacations.	Day outings and weekends;
4. Typical sizes of areas	One to fifty or at most to a few hundred hectares.	Usually some thousands of hectares, perhaps many thousands.	A hundred to several thousand hectares.
5. Common types of agency responsibility	City, county or other local government; private.	National parks and national forests primarily; state parks in some cases; private, especially for seashore and major lakes.	State parks; private.

Source: Clawson and Knetsch (1971, p. 37)

TABLE 4

Canada Land Inventory:
Land capability classification for outdoor recreation -
description of capability classes

Class	Description
1 - Lands in this Class Have a Very High Capability for Outdoor Recreation	Class 1 lands have natural capability to engender and sustain very high total annual use based on one or more recreational activities of an intensive nature. Class 1 land units should be able to generate and sustain a level of use comparable to that evident at an outstanding and large bathing beach or a nationally known ski slope.
2 - Lands in this Class Have a High Capability for Outdoor Recreation	Class 2 lands have natural capability to engender and sustain high total annual use based on one or more recreational activities of an intensive nature.
3 - Lands in this Class Have a Moderately High Capability for Outdoor Recreation	Class 3 lands have natural capability to engender and sustain moderately high total annual use based usually on intensive or moderately intensive activities.
4 - Lands in this Class Have Moderate Capability for Outdoor Recreation	Class 4 lands have natural capability to engender and sustain moderate total annual use based usually on dispersed activities.
5 - Lands in this Class Have Moderately Low Capability for Outdoor Recreation	Class 5 lands have natural capability to engender and sustain moderately low total annual use based on dispersed activities.
6 - Lands in this Class Have Low Capability for Outdoor Recreation	Class 6 lands lack the natural quality and significant features to rate higher, but have the natural capability to engender and sustain low total annual use based on dispersed activities.
7 - Lands in this Class Have Very Low Capability for Outdoor Recreation	Class 7 lands have practically no capability for any popular types of recreation activity, but there may be some capability for very specialized activities with recreation aspects, or they may simply provide open space.

Source: Canada Department of Regional Economic Expansion (1969, page 113)

TABLE 5

Canada Land Inventory
Recreation capability for Alberta and Canada

Capability Class	Alberta		Canada	
	Square Miles	%	Square Miles	%
1	20.6	0.0*	506.7	0.1
2	106.8	0.0*	2,739.6	0.3
3	489.6	0.3	19,394.4	2.0
4	10,701.3	5.8	67,380.4	7.1
5	86,593.8	46.7	265,399.0	27.9
6	75,144.3	40.5	519,407.7	54.7
7	4,079.9	2.2	48,275.9	5.1
Unclassified land** within CLI area	8,401.6	4.5	26,579.4	2.8
TOTAL	185,537.9†	100.0	949,683.0	100.0

Source: Taylor (1978, p. 14).

Notes:
* Percentage value was less than 0.1.
** Includes urban areas, military reserves, and land within national parks.
† The area mapped by the CLI represents approximately 75 percent of the province's land area.

Reference to Table 5 and the Land Capability for Recreation 1:1,000,000 Map Series for Alberta (Environment Canada 1975a) clearly illustrates the small amount of land with high capability for recreation that exists in Canada and Alberta. Unfortunately, reduction of the 1:1,000,000 summary map for the province for inclusion in this report would have eliminated most of the first three capability classes because of the restricted nature of their size. The key point in relation to these top quality recreation lands is that they almost invariably occur either as shore zones on lakes (Taylor 1978), as significant parts of river corridors or in the Eastern Slopes adjacent to the boundaries of the national parks. Land classified as Class 4 and 5 occurs as a distinct belt along the Eastern Slopes and the adjacent foothills. The land of lower recreation potential is distributed in the northern part of the province and in the area of better quality agricultural land extending from north of Edmonton through the Edmonton-Calgary corridor. In addition, there is a substantial area of land with low recreation capability in the south-eastern part of the province.

At a broad level of analysis the observation may be made that there tends to be an inverse relationship between the quality of the land base for recreation and the quality of the land for agriculture (Ironside 1971, Phillips and Roberts 1973). The reason for this situation is that whereas agriculture tends to prefer uniform conditions in terms of topography and soils for efficient farming, major attributes of an area's value for recreation are the diversity of land forms and vegetation and the interface between natural and man-modified landscapes (Linton 1968).

Recreational Land Uses On the basis of the Canada Land Inventory data it can be shown that all lands have some capability for outdoor recreation. A factor which is therefore important in determining the availability of this land for recreation is the proportion of the province's land base that is specifically designated for recreation purposes.

An estimate of the use of surface land has been made by Alberta Agriculture (1980) and forms Table 6. Immediately apparent from the figures is the small proportion (9.5 percent) of the province that is specifically allocated to recreational use. However, this figure does not differentiate between land designated for recreation and land which may be more accurately described as being allocated to conservation or preservation. Although multiple-use lands involving conservation and recreation are common, substantial areas exist, particularly within national parks and wilderness areas, where recreation is virtually non-existent.

TABLE 6

Estimated use of surface land in Alberta (1979)

Land Use	Acres	Percent of Total
Agricultural Uses	51,271,412	31.4
Recreational Areas excluding urban	15,476,959	9.5
Urban & Transportation		
Cities, Towns, Villages	473,653	0.3
Roads & Highways	921,127	0.6
Railways	80,890	*
Airports	28,960	*
Non-Settled Public Lands	86,107,813	52.7
Metis Colonies	1,248,640	0.8
Indian Reserves	1,622,400	1.0
Federal Owned Lands (such as military areas, but excluding airports)	2,166,831	1.3
Water Bodies	3,983,715	2.4
PROVINCIAL TOTAL	163,382,400	100.0

Source: Alberta Agriculture (1980, p. 18).

Notes:
* Less than 0.1 percent.

If this distinction is made, lands allocated to recreation and to integrated recreation/conservation uses would amount to possibly only five percent of the area of the province. In contrast, land under agricultural uses (31.4 percent) and non-settled public lands (52.7 percent) account for vast proportions of the province's land base. It should be noted, however, that the bulk of the non-settled public lands refers to forested land, a substantial area of which occurs in the Eastern Slopes where an integrated land-use policy involving recreation is applied (Alberta Energy and Natural Resources 1977).

A breakdown of the recreation use of land in Alberta is shown in Table 7. Not surprisingly, by far the largest area identified as being in recreational use is contained within the national parks (86.2 percent). An important consideration in terms of the availability of this land for recreation is that with the exception of Calgary, most major centres of population within the province are located at a considerable distance from the vast proportion of these park areas. The national park areas, therefore, fall within the resource-based category of Clawson's classification of recreation resources, both on the basis of the nature of the resource and its location in relation to the majority of the potential user population. Inclusion of provincially administered recreation areas such as provincial parks and wilderness areas does little to offset the imbalance between the location of the resource areas and centres of demand if the amount of land is the criterion adopted. Recreation lands administered by municipalities account for a small proportion of the recreational land within the province but are important from their proximity to and convenience for urban populations.

From a land-use standpoint, therefore, only a very small proportion of the province's recreational land potential is contained within formally designated recreation areas. However, it must be remembered that many of the high quality recreational capability areas associated with shorelines are found within a number of the province's provincial parks, whereas a number of the high quality "upland" areas are located in the Eastern slopes where they may coincide with the "general recreation zone."

Ownership Status of Land Many of the issues associated with the planning and management of natural resources can be traced to the arrangements under which property is held (Alberta Land Use Forum 1976, Barlowe 1972). A major concern has been the extent to which different land tenure structures can be used as a mechanism for influencing land management practices (Timmons and Cormack 1971). Associated with this focus has been the interplay between the private sector and the argument for a greater degree of social control over land use for the reasons of externalities, interdependencies, indivisibilities, and efficiency (Clawson 1975). This argument for greater public control has evolved with the recognition of amenity resources which often assign a public non-economic value to private property (Berry and Steiker 1977). The retention of land in private ownership has certain advantages in the preservation of open space and other amenity interests, including active management by the private landowner and the on-going financial contribution to the tax base (see Howard and Crompton 1980). However, Feist (1978, p. 24) has suggested that "in a property-owning democracy, public ownership of land is the only absolute guarantee that the public interest will prevail and that valued landscapes and other features will at least be protected." Hofstee (1972) has argued that in densely populated countries where there is intense land-use competition, the retention of private property is dysfunctional in terms of developing a balanced economic policy and planning system.

TABLE 7

Estimated recreational use of land in Alberta (1979)

Type of Use	Number of Administrative Units	Acres	Percent of Total
Lands Administered by Recreation and Parks			
Provincial Parks	58	302,541	
Wilderness Areas	3	452,474	
Natural Areas	5	2,127	
Historic Sites (Alberta Culture)	28	88	
SUB-TOTAL		757,230[1]	4.9
Lands Administered by Energy and Natural Resources, Public Lands Division			
Natural Areas	260	41,680[2]	0.3
Lands Administered by Energy and Natural Resources, Forest Land Use Branch			
Recreational Areas		97,952	
Willmore Wilderness		1,135,872	
SUB-TOTAL		1,233,824[3]	7.9
Lands Administered by Alberta Transportation			
Highway Campsites	204	1,576[4]	*
Lands Administered by Municipalities			
Urban Parks and Playgrounds		28,077[5]	0.2
Rural Parks and Playgrounds		67,780[5]	0.4
Lands Administered by Parks - Canada			
National Parks	4	13,364,329[2]	86.2
Private Facilities		10,540[4]	0.1
TOTAL RECREATIONAL LAND		15,505,036	100.0

Source:
Alberta Agriculture (1980). Estimated Alberta Surface Land Area by Various Types of Land Use (1979).

Notes: * Less than 0.1 percent.
[1] Recreation and Parks, 1979.
[2] Alberta Energy and Natural Resources - Public Lands Division, 1979.
[3] Estimated by the Resource Economics Branch, based on information provided by Alberta Energy and Natural Resources, Forest Land Use Branch, 1979.
[4] Estimated by the Resource Economics Branch, based on information provided by Travel Alberta - 1979, Visitors Accommodation Guide.
[5] Estimated by the Resource Economics Branch, based on information provided by the Alberta Municipal Affairs, Special Areas Board, (1978), Travel Alberta - 1979 Visitors Accommodation Guide, and Municipal Statistics, 1978.

The argument for public ownership is frequently based on the belief that social benefits as opposed to solely economic values will be taken into consideration in land-use planning decisions. Consequently, in countries or parts of countries where private ownership prevails, attempts are frequently made to obtain an element of public control if not outright acquisition of certain property when it is deemed such action is in the public interest. In a recreational context the ownership status and, more specifically, the application of the concept of the "bundle of rights" over land (see Esau 1974), can have a direct bearing on the preservation of open space (Coughlin and Plaut 1978, Whyte 1970), the retention of attractive landscapes (Jordahl 1963), the conservation of threatened wildlife habitats (Bodrogi 1979) and the right of access to rural land (Conservation Council of Ontario 1975, Cullington 1980a, Lee 1981, Pigram 1981, Thomson and Whitby 1976).

Consequently, in these areas where public lands occur, the implementation of policies which incorporate the public interest, allow public access and safeguard amenity values should, theoretically at least, be more easily applied and widely practiced. For example, the extensive areas of public forest and range land in the United States are an extremely important component of that country's recreation resource base (U.S. Department of Agriculture 1980). In Canada the availability of Federal Lands has been an important factor in the historical evolution of this country's national parks (Nicol 1969). The existence of public land is therefore a distinct advantage in expediting the establishment of parks and other components of the recreation supply system as well as the integration of recreation with other forms of land use (see Alberta Land Use Forum 1976).

Reference to Figure 1 and Table 8 illustrates the ownership status of land in Alberta and gives the impression that the province is well endowed with land retained in the public sector. In contrast, privately owned land accounts for only 27.3 percent of the province's total area. This apparently advantageous situation needs to be qualified with regards to the level of recreation opportunity provided by public or crown lands in the province.

Consideration of the spatial distribution of public lands in Alberta reveals that the greater proportion of this area is located in the Green and Yellow Areas of the province and, as such, spatially divorced from centres of population. In contrast, the White Area, while containing public land (see Table 8), is predominantly in private ownership and given over to agriculture. An initial conclusion that may be drawn from this spatial imbalance between the location of the major area of public land and the origin of recreation demand in centres of population is that this relationship could become more significant in the future with the increasing demand for outdoor recreation and the possible limitation of longer trips to recreation destination areas because of increases in gasoline prices.

Within the White Area land transferred to private ownership has tended to be those areas suitable for agriculture on the basis of land capability, with the result that the land remaining does have potential for accommodating extensive forms of outdoor recreation (M. Forbes 1981: pers. comm.). Many of these areas have already become provincial parks and the public land status of the remaining areas provides a holding capability with the possibility that some of this land could be designated as parks in the future. Notwithstanding this situation, there is a relative shortage of public lands in those parts of the province where there is a deficiency in the provincial park system, both from the point of view of providing

TABLE 8

Ownership status of land in Alberta (1981)

Ownership Status	Square Miles	Percent of Total
Privately-owned land	69,756	27.3
Public Lands		
Under disposition leading to title	1,236	0.5
Under disposition not leading to title	10,972	4.3
Special areas	5,462	2.1
Parks, historic sites, wilderness areas, natural areas	3,019	1.2
Metis settlements	1,951	0.8
Indian reserves	2,536	1.0
Non-settled public lands		
Forested lands within the Green Area*	102,040	40.0
Forest management agreement areas and provisional reserve	27,941	10.9
Vacant public land (within Yellow and White Areas**	6,026	2.4
Federally-controlled lands (national parks, research stations, Department of National Defense, etc.)	24,346	9.5
TOTAL AREA +	255,285	100.0

Source: Alberta Energy and Natural Resources (1981b, p. 104).

Notes:

*Green Area: Forested lands withdrawn from settlement, managed for forestry and other multiple uses.

**Yellow Area: Lands located in the Peace River region. Public lands in this area are managed for multiple use, including agricultural uses, pursuant to The Public Lands Act and regulations.

White Area: The settled area of the Province. Suitable public lands within this zone may be disposed pursuant to The Public Lands Act and regulations, except for homestead sale dispositions.

+ The total area of Alberta comprises 248,800 square miles (97.5 percent) of land and 6,485 square miles (2.5 percent) water.

representation of the five natural regions and providing opportunities for recreation (Alberta Recreation and Parks 1979, D. Perraton 1981: pers. comm.). Reference to Figure 4 illustrates those natural regions which are currently poorly represented by the conservation system within the province (including national parks, provincial parks, and other protected areas), for example the Grassland Region and the Parkland Region. These areas largely coincide with the extent of the White Area of the province which is predominantly under private ownership.

A further factor relating to land ownership status and the availability of this land for recreation is the fact that considerable areas of public land in the White Area are under the disposition of grazing permits or leases. This pattern of land tenure is particularly prevalent in a modified "U" shaped pattern which extends from Medicine Hat down the Alberta/Saskatchewan border, along the Alberta side of the international border and up into the foothills west of Calgary (M. Forbes 1981: pers. comm.). In addition, there are considerable areas of public lands under grazing dispositions within the Special Areas of east central Alberta, and within the Eastern Irrigation District in southern Alberta. The observation has been made (IBI Group 1979) that some holders of grazing dispositions have adopted the attitude that they own the property and the wildlife on it, with the consequence that not only is public access an issue but that the possible assembly of large areas of land for tourism or recreational purposes would encounter strong opposition.

The conclusions that may be derived from this brief overview of the status of land ownership is that, while there is a considerable amount of public land in the province, much of this is not strategically well located to provide opportunities for outdoor recreation. As a result, the growth in recreation demand has important implications for the use of private land for recreation, most of which is currently used for agriculture.

Agencies Involved with Outdoor Recreation One of the main objectives in examining the supply base for recreation has been to provide an indication of the factors which influence the amount of land available for recreation and the contribution that agricultural land may make to the open space system for recreation in the province. Systems planning for parks and outdoor recreation is a relatively new undertaking which can be traced back to the 1960s (Mitton 1977). Fundamental to the concept of systems planning is the interaction between two parallel systems, the planning or controlling system and the system which is being planned or controlled (Hall 1975). Applying this model to the provision of recreation opportunities in Alberta, the different agencies involved in providing for recreation may be loosely interpreted as the controlling system and the resulting recreation open space may be envisaged as the system which is being planned or controlled. Both of these components have been extensively studied in the Alberta context.

Comprehensive analyses of the recreational involvement of various governmental units have been prepared by Burton and Kyllo (1974), Makale and Kyllo Planning Associates Ltd. (1978), and Alberta Recreation, Parks and Wildlife (1977). An examination of these agencies and the specific functions they serve toward the provision of leisure and recreation opportunities in the province is beyond the scope of this report. Nevertheless, a number of observations are in order.

The first distinguishing feature is the number of agencies involved (Morrison 1981). Alberta Recreation, Parks and Wildlife (1979) in its analysis identified the following agencies in the Alberta Government which assumed responsibility in the outdoor recreation field: Agriculture, Business Development and Tourism (present title – Tourism and Small Business), Culture, Energy and Natural Resources (currently includes Alberta Forest Service, Public Lands Division and Fish and Wildlife Division), Environment, Municipal Affairs, Recreation, Parks and Wildlife (currently Alberta Recreation and Parks) and Transportation. Whereas Alberta Recreation and Parks, which includes three Divisions – Recreation, Parks and Administration (Alberta Recreation and Parks 1981c) – has the clearest mandate to provide opportunities for recreation, the other agencies have varying levels of commitment.

The second distinguishing feature associated with the delivery of recreation opportunities is, therefore, the different levels of mandate associated with each of these agencies. Makale and Kyllo Planning Associates Ltd. (1978, p. 2) noted that the majority of services has been based on tertiary rather than primary or secondary mandates. They define the different levels as follows: (1) primary mandate – specifically required by legislation to provide leisure services; (2) secondary mandate – permitted, but not required, to provide leisure services; and (3) tertiary mandate – able to undertake a service through responsibilities that are not directly related and do not specifically refer to leisure or recreation. In examining the various services provided by the different agencies, it is evident that it is somewhat misleading to associate an individual agency with a specific level of mandate since that level varies depending on the nature of the particular program being considered.

A number of conclusions reached by Makale and Kyllo Planning Associates Ltd. (1978) are relevant to this study. The first important point is that with the exception of Recreation and Parks, the recreation services being provided are predominantly through secondary or tertiary mandates. Consequently, it is more likely that these agencies' major concern and expertise is in non-recreational issues. This orientation is particularly important, considering the fact that outdoor recreational activities taking place outside parks and similarly designated areas invariably occur as subsidiary or secondary forms of land use in a multiple land-use situation, where the controlling interests in terms of land ownership attitude and management objectives are non-recreational (see Pearse 1969a).

Closely associated with the previous problem is the fact that recreation policy development is extremely difficult to achieve because the primary responsibility of the agency is not towards recreation. Consequently, no overall policy framework has been developed, resulting in conflicts and overlap in some areas and gaps in others (Morrison 1981). Balmer (1979, p. 3) has summarized the situation as follows:

> *There is apparent inability to solve recreation resource management problems primarily through the lack of coordinated approach. The provincial agencies, rural and urban municipalities and private enterprises individually strive to provide recreation opportunities.*

This situation evidently continues to exist despite the establishment in 1968 of the Alberta Government Recreation Committee with the purpose of providing advice to the Minister of Recreation on the coordination of interdepartmental recreation policy, planning and program

development (Alberta Municipal Affairs 1980, p. 69). This committee is composed of 12 government members representing the following agencies: Advanced Education and Manpower, Agriculture, Culture, Education, Energy and Natural Resources, Environment, Federal and Intergovernmental Affairs, Municipal Affairs, Social Services and Community Health, Recreation and Parks, Tourism and Small Business, and Transportation.

The diversity of agencies involved in outdoor recreation is further compounded by the number of committees which exist. Makale and Kyllo Planning Associates Ltd. (1978) observe that this multitude of committees, which are usually task or activity oriented, have little effect on overall leisure conditions and reflect a lack of leisure policy direction. These observations tend to be supported by reference to a number of policy and discussion documents that have been prepared over the last decade, for example, Alberta Government Recreation Committee (1972, 1974, 1978a) and the Alberta Land Use Forum (1976), the proposals of which for the most part have not been developed and implemented (Red Deer Regional Planning Commission 1978a).

Confusing the situation still further is the large number of organized recreation groups that exist in the province, each of which attempts to receive appropriate consideration of its needs and requirements from the provincial government. The establishment of an Outdoor Recreation Council similar to that existing in British Columbia has been suggested as one mechanism for coordinating these disparate interest groups including both conservation and more activity oriented interests (M. Robinson 1981: pers. comm.).

A third significant observation made by Makale and Kyllo Planning Associates Ltd. (1978) is on the shortcomings that arise when policies conceived at the provincial level are applied at the local level without adequate consideration of the prevailing conditions. This important point was stressed by a number of interviewees from both the agricultural and recreation interest groups who were contacted during this study. Their concerns were directed toward developing policies associated with the recreational use of agricultural land and the need to take into account the different patterns of agriculture throughout the province and the varying intensities of recreational use at both the regional and local levels.

Makale and Kyllo Planning Associates Ltd. (1978, p. 4) also draw attention to the fact that "the majority of (leisure) programs do not serve the cross-section of provincial population even though Albertans are considered the broad client group." Specific reference is made to the fact that most of the provincial park opportunities are utilized more fully by upper income levels and that many of the services oriented towards tourists do not provide recreational opportunities for all Albertans. Certain recreation groups feel their interests are not adequately catered for through the existing policies and programs pursued by Alberta Recreation and Parks and other agencies with recreation mandates. Most notable among these groups are the vehicle or motorized recreation groups including the snowmobilers (D. Blakeman 1981: pers. comm., B. Clark 1981: pers. comm.), four-wheel drivers (Alberta Four Wheel Drive Association 1978; M. Robinson 1981: pers. comm.), and motorcycle riders (R. Zacsko 1981: pers. comm.).

The final observation from Makale and Kyllo Planning Associates Ltd. (1978) that will be considered is their reference to the potential for destruction of natural leisure environments. They suggest that conflicts are most likely where economic development and tourism

functions are superimposed on natural environments. Evidence of this conflict is afforded by the reaction of environment groups to the proposed Cline River Resort Complex near the Kootenay Plains (Alberta Wilderness Association 1981b), the proposed development in the Willmore Wilderness Park and the level of development in Kananaskis Country (D. Pachal 1981: pers. comm., B. Staszenski 1981: pers. comm.).

The review of the agencies involved in outdoor recreation has provided an indication of the difficulty of developing a systems approach to providing recreation opportunities in Alberta. Most critical in terms of the recreational use of private agricultural land is the apparent reluctance of any of the agencies mentioned to implement policies which recognize the importance of the agricultural land base for non-consumptive forms of outdoor recreation.

Outdoor Recreation/Open Space System A distinctive feature of Tables 6 and 7 which summarized the land-use pattern of the province (Table 6) and the make-up of the recreation land base (Table 7) was the fact that, although less than 10 percent of the province may be classified as being in recreational use, there are a multitude of components which comprise this recreation space.

The currently accepted objective of recreation planning and management is to provide as wide a range of recreation opportunities as is realistically possible in order that the potential recreationist can exercise choice in seeking a specific recreation experience (Burton 1976). For the most part, this range or diversity has been achieved through the provision of distinctive physical settings which have the capability to support a variety of recreation activities ranging from extensive environmentally based recreation to intensive facility based recreation (see Chubb and Chubb 1981, Mitton 1977). With the increasing acceptance of the behavioural interpretation of recreation this range of opportunity is seen not solely in terms of different physical or environment settings, but as a combination of these and various social and management settings which ultimately influence the type and quality of the recreation experience (Brown, Driver and McConnell 1978, Clark and Stankey 1979, Driver and Brown 1978, Hoots and Buist 1980, More and Buhyoff 1979). The outcome of this approach is a recreation opportunity spectrum of recreation experiences ranging from primitive to urban, with the type of experiences not being restricted necessarily to a particular type of activity or physical setting. Cheek, Field and Burdge (1978) have noted that patterns of recreation are frequently not related or dependent on the recreation activity for which an area is planned. Despite the inclusion of this behavioural dimension, however, these new concepts are by-and-large compatible with the traditional activity approaches from the standpoint of providing a range of recreation opportunities.

The development of an outdoor recreation open space system is not solely restricted to providing a range of recreation opportunities. A second requirement is the need to select open space areas which are representative of the bio-physical environment or landscapes of the territorial unit being considered (Greater Vancouver Regional District 1978, Parks Canada 1971). The third consideration is that of the geographic scale of the provision (Atkisson and Robinson 1969). This latter requirement could take into account the spectrum from local to provincial levels of opportunity and is intimately associated with the involvement of the different tiers of government.

On the basis of this discussion, the provision of an outdoor recreation/open space system should ideally take into account three dimensions: (1) diversity of recreation activity/experience opportunities; (2) representation of the diversity of the landscape; and (3) geographical scale of opportunity. The other prerequisite of such a system is that the function of each component of the system is considered in relation to all the others through an integrated as opposed to a sectoral approach to planning and management.

The Red Deer Regional Planning Commission (1978a) in its report *Regional Recreation: Elements and Directions* provides a useful review of what it terms "recreation place systems." With reference to Alberta, the Commission concluded that "the recreation place system within Alberta, although quite broad, is loosely defined and administratively dispersed." (Red Deer Regional Planning Commission 1978a, p. 65). Interpreting this statement, it would seem that many of the components of an outdoor recreation/open system exist (see Alberta Land Use Forum 1976) but that there is a lack of integration between the individual parts. In an attempt to develop a recreation place system for its own area, the Red Deer Regional Planning Commission proposed a system involving six major categories. This scheme is presented as Table 9 in order to provide an indication of the complexity of the problem involved in implementing a recreation place system.

Returning to the provincial level, Skydt (1980) has stated that the three levels of planning responsibility, municipal, regional and provincial, must work collectively towards a provincial

TABLE 9

Recreation place system

Place Type	Emphasis	Nature of Use	Example
Structural	Integrity of User	Intense, Developed	arena ball park
Resource Facility			campground ski hill
Extensive Environment Area			river valley trail
Historic and Cultural Sites			historic site cemetery
Natural Monuments			sanctuary geologic site
Primitive Environment	Integrity of Resource	Extensive, Pristine	wilderness wild river

Source: Red Deer Regional Planning Commission (1978a, p. 70).

framework incorporating the recreation – conservation spectrum. The following is a brief overview of the system as it currently exists.

The five national parks which are located wholly or partly in the province, Waterton Lakes, Banff, Jasper, Elk Island, and Wood Buffalo, account for the largest proportion of the area of the province's recreation/open space system.

Complementing the national parks are the 59 provincial parks in Alberta (see Figures 5 and 6). Although developed initially on an incremental basis, the evolution towards a provincial park system is now much in evidence (Alberta Recreation, Parks and Wildlife 1977, Alberta Recreation and Parks 1979, Morrison, Walls and Bloomfield 1980). A significant step in this direction was the ministerial approval given April 1, 1979, to a new park classification system. The five tier classification includes the following classes: (1) preservation parks; (2) wildland parks; (3) natural environment parks; (4) recreation parks or recreation areas; and (5) park reserves (Alberta Recreation and Parks 1979).

Despite the establishment of new provincial parks, population expansion and the concentration of this growth in the major centres and in the resource towns of the northeastern part of the province has resulted in a large and increasing shortage of park opportunities in these areas (Alberta Recreation and Parks 1979). Representation of this situation is provided in Figure 7. The map indicates the relative number of campsites (including national and provincial parks, Alberta Forest Service sites and Department of Transportation campsites) available to people within 200 miles of where they live on a per capita basis (Alberta Recreation and Parks 1979).

A low recreation opportunity quotient means a high degree of competition for available camping opportunities within weekend driving range of people living within these areas (Alberta Recreation and Parks 1979, p. 6). Potential campers can obviously respond to this situation in a number of ways including travelling further to alternative areas, using different destinations such as municipal parks or resorting to the use of sites provided by the private sector. The latter alternative is particularly relevant to the main focus of this report. In the first instance a number of these sites have been developed on agricultural land. The second implication is that a variety of outdoor recreation activities are invariably associated with camping (Hendee, Gale and Cotton 1971) and, as a result, these activities are likely to take place in a surrounding area which could well be in agricultural use.

An additional factor is that except for a limited number of parks, Cypress Hills and Lesser Slave Lake for example, few of the non-mountain parks have the size or capability to support dispersed recreation in a natural environment (Alberta Recreation and Parks 1979). Furthermore, because most of the parks have a nuclear shape there is limited potential for developing linear recreation activities such as hiking or riding trails over any appreciable distance. Although a number of studies have made reference to the need to develop trails and recreation corridors which would create linkages between the recreation nodes provided by parks and other recreation areas (Alberta Recreation, Parks and Wildlife 1978, Deeg 1977, Smith 1976), little progress appears to have been made towards this objective. Prerequisites for the development of such a system of linear open space, which would invariably involve agricultural land if developed in the White Area, would be the negotiation of access agreements or easements with private landowners and the minimization of the liability

Figure 5. Location of Alberta Provincial Parks

PRODUCED 1981 REVISED 1982

ALBERTA RECREATION AND PARKS

Base map produced by ALBERTA TRANSPORTATION

NAME OF PARK	LOCATION	SIZE		CAMPING FACILITIES														PICNIC AREA				RECREATION								CONVENIENCES							
					FEES																																
		HECTARES	ACRES	CAMPING SITES (Number Open)	$3.00/NIGHT	$4.00/NIGHT	$5.00/NIGHT	ELECTRICAL HOOK-UPS	DOUBLE UNIT CAMPING	GROUP CAMPING	SHELTERS	STOVES/FIREPLACES	TOILETS	SHOWERS	SHELTERS	TABLES	STOVES/FIREPLACES	TOILETS	FISHING	SWIMMING	CHANGE HOUSES	TRAILS	INTERPRETIVE PROGRAM	PLAYGROUNDS	BOATING	BOAT LAUNCH	BOAT RENTALS	GROCERIES	GAS and OIL	PUBLIC PHONE	LAUNDRY FACILITIES	SEWAGE DUMPING	CONCESSION
Aspen Beach	14 km west of Lacombe	215	531	342	•		•			•		•	•	•	•	58	•	•	•	•				•	•			•			•				
Beauvais Lake	11 km west; 8 km south of Fincher Creek	593	1466	95	•				•			•	•	•	•	85	•	•	•	•		•		•	•			•			•				
Big Hill Springs	6 km north; 5 km east of Cochrane	35	83										•																						
Big Knife	8 km west; 13 km south of Forestburg	296	732	51	•							•	•			78	•	•	•	•		•		•	•			•			•				
Bow Valley	16 km east of Canmore	809	2000	244		•	•	•	•	•	•	•	•	•		135	•	•	•			•	•	•	•						•	•	•		
Bragg Creek	18 km west; 21 km south of Calgary	122	302													172	•	•				•	•	•							•				
Calling Lake	48 km north of Athabasca	749	1839	58		•			•			•	•			16	•	•						•	•										
Carson-Pegasus	6 km west; 11 km north of Whitecourt	1211	2990	Under Development																															
Chain Lakes	38 km southwest of Nanton	408	1011	140	•						•		•	•	•	35	•	•						•	•						•		•		
Cold Lake	3 km east of Cold Lake	368	884	117	•	•			•		•			•	•	60	•	•	•	•	•	•	•	•	•						•				
Crimson Lake	6 km west; 6 km north of Rocky Mountain House	3443	8507	218	•	•			•	•		•	•	•	•	15	•	•	•	•	•	•	•	•	•			•		•	•		•	•	•
Cross Lake	8 km north; 19 km northeast of Jarvis	3870	9130	80	•							•	•	•		80	•	•	•	•	•			•	•			•			•				
Cypress Hills	30 km west; 34 km south of Medicine Hat	20,000	49,420	591	•	•	•	•	•		•	•	•	•	•	235		•	•	•	•	•	•	•	•		•		•	•	•	•	•	•	•	•
Dillberry Lake	6 km east; 12 km south of Chauvin	1012	2500	62	•							•	•	•		74	•	•	•				•	•	•			•			•				•
Dinosaur	8 km north; 25 km northeast of Brooks	5946	14,693	44	•						•	•	•	•		36	•	•				•	•								•		•		
Dry Island Buffalo Jump	16 km east of Huxley	996	2460								•					100	•	•	•																
Fish Creek	Calgary southern limit	731	1806												•	198	•	•	•	•	•	•	•						•						•
Garner Lake	5 km north of Spedden	74	182	75	•						•	•	•	•		125		•	•	•				•	•						•		•		
Gooseberry Lake	2 km east; 13 km north of Consort	53	130	67	•				•	•	•			•	•	53	•	•	•	•		•		•	•						•		•	•	•
Gregoire Lake	19 km south; 18 km east of Fort McMurray	689	1704	140	•								•	•	•	70	•	•	•	•				•	•						•		•	•	•
Hasse Lake	11 km west; 6 km south of Stony Plain	69	170												•	46	•	•		•				•	•						•				
Hilliard's Bay	11 km southeast of Grassland	2280	5754	134	•					•	•		•	•		80	•	•		•	•	•	•	•	•						•				
Jarvis Bay	7 km north of Sylvan Lake	67	216	139		•							•	•				•			•				•						•		•		
Kananaskis	27 km east; 80 km south of Canmore	80,000	134,315	554	•								•	•	•	81	•	•				•	•	•	•			•			•				•
Kinbrook Island	13 km south; 2 km west of Brooks	39	96	223	•							•	•	•		40	•	•						•	•						•				
Lesser Slave Lake	5 km north of Slave Lake	7280	18,018	105	•						•		•	•		24	•	•	•	•	•	•	•	•	•						•		•		
Little Bow	10 km east; 2 km south of Champion	110	272	193	•									•		55	•	•						•	•			•			•		•	•	
Little Fish Lake	16 km south; 22 km east of Drumheller	61	151	59	•								•	•				•	•	•				•	•			•			•				•
Long Lake	19 km east; 14 km north of Newbrook	764	1887	269	•	•	•	•	•			•	•	•		100	•	•	•	•				•	•						•		•	•	•
Mo-Mo-O Beach	Summer Village of Mo-Mo-O Beach	3	4												•	67	•	•	•					•	•										
Midland	2 km west of Drumheller	585	1446													90		•	•					•											
Miquelon Lake	3 km west; 30 km north of Camrose	423	1043	260		•			•	•	•	•		•	•	221	•	•		•	•	•	•	•	•			•			•		•		
Moonshine Lake	20 km west; 5 km north of Spirit River	847	2093	59	•								•	•		80	•	•	•	•	•			•	N			•			•		•	•	•
Moose Lake	3 km north; 11 km west of Bonnyville	736	1818	59	•								•	•		30	•	•	•					•	•						•				
Notikewin	57 km east of Manning	9957	33,887	Under Development																															
O'Brien	11 km south of Grande Prairie	67	165												•	63	•	•						•	•										
Park Lake	14 km north; 2 km west of Lethbridge	234	583	53	•							•	•	•		40	•	•	•		•			•							•		•	•	
Pembina River	2 km west of Entwistle	167	413	139	•								•	•		40	•	•	•		•			•	•						•		•		
Pigeon Lake	5 km west; 19 km north of Winfield	340	819	275		•				•	•	•	•	•	•	100	•	•	•	•				•	•				•				•	•	
Police Outpost	19 km west; 19 km south of Cardston	146	361	48	•					•			•	•		60		•	•					•	•						•				
Queen Elizabeth	3 km north; 5 km west of Grimshaw	86	211	86	•					•			•	•		43	•	•						•	•						•				
Red Lodge	14 km west of Bowden	84	189	100	•					•		•	•	•		60	•	•	•					•	•						•				•
Rochon Sands	14 km north; 1 km west of Erskine	118	287	76	•								•	•		30	•	•	•		•			•	•	•	•		•	•	•		•		
Saskatoon Island	19 km east; 3 km north of Grande Prairie	161	351	41	•						•		•	•		30	•	•			•		•	•	•						•				
Sir Winston Churchill	19 km northeast of Lac La Biche	239	591	89	•						•	•	•	•		75	•	•	•	•	•	•	•	•	•						•				
Strathcona Science	Edmonton eastern limit	108	270												•	60	•	•				•	•							•				
Sylvan Lake	17 km west of Red Deer	88	218												•	60		•	•	•				•	•						•				
Taber	2 km west; 3 km north of Taber	51	126	53	•								•	•	•	60	•	•	•					•							•		•	•	•
Thunder Lake	21 km west of Barrhead	350	814	139	•							•	•	•	•	75	•	•		•	•	•		•	•	•						•		•		
Tillebrook	8 km east of Brooks	136	344	139		•	•	•				•		•	•	10						•	•	•	•						•	•	•		
Vermilion	2 km north of Vermilion	797	1968	111	•	•				•	•		•	•	•	60	•	•	•		•			•							•		•		
Wabamun Lake	3 km west; 2 km south of Wabamun	211	521	219	•	•				•	•	•	•	•	•	200	•	•	•					•	•						•	•			
William A. Switzer	3 km west; 16 km north of Hinton	3000	6027	199	•	•		•		•	•	•	•	•	•	55	•	•		•	•	•	•	•	•			•			•		•		
Williamson	10 km west; 2 km north of Valleyview	17	43	62	•							•	•	•		14	•	•	•					•	•						•				•
Willow Creek	6 km west; 9 km south of Stavely	160	395	59	•							•	•	•		10		•	•					•						•					
Winagami Lake	16 km south; 11 km east of McLennan	1211	3000	84	•					•			•	•		30	•	•	•	•				•							•		•	•	
Woolford	3 km northwest; 13 km southeast of Cardston	36	87	36	•								•	•		30	•	•						•							•				
Writing-on-Stone	30 km east; 10 km south of Milk River	406	1000	39	•						•	•	•	•		80	•	•				•	•	•							•		•		
Wyndham-Carseland	2 km east; 2 km south of Carseland	175	432	150	•						•		•	•		100	•	•						•											
Young's Point	36 km west; 8 km northeast of Valleyview	1000	2500	72		•							•	•		60								•	•	•	•	•	•	•			•		

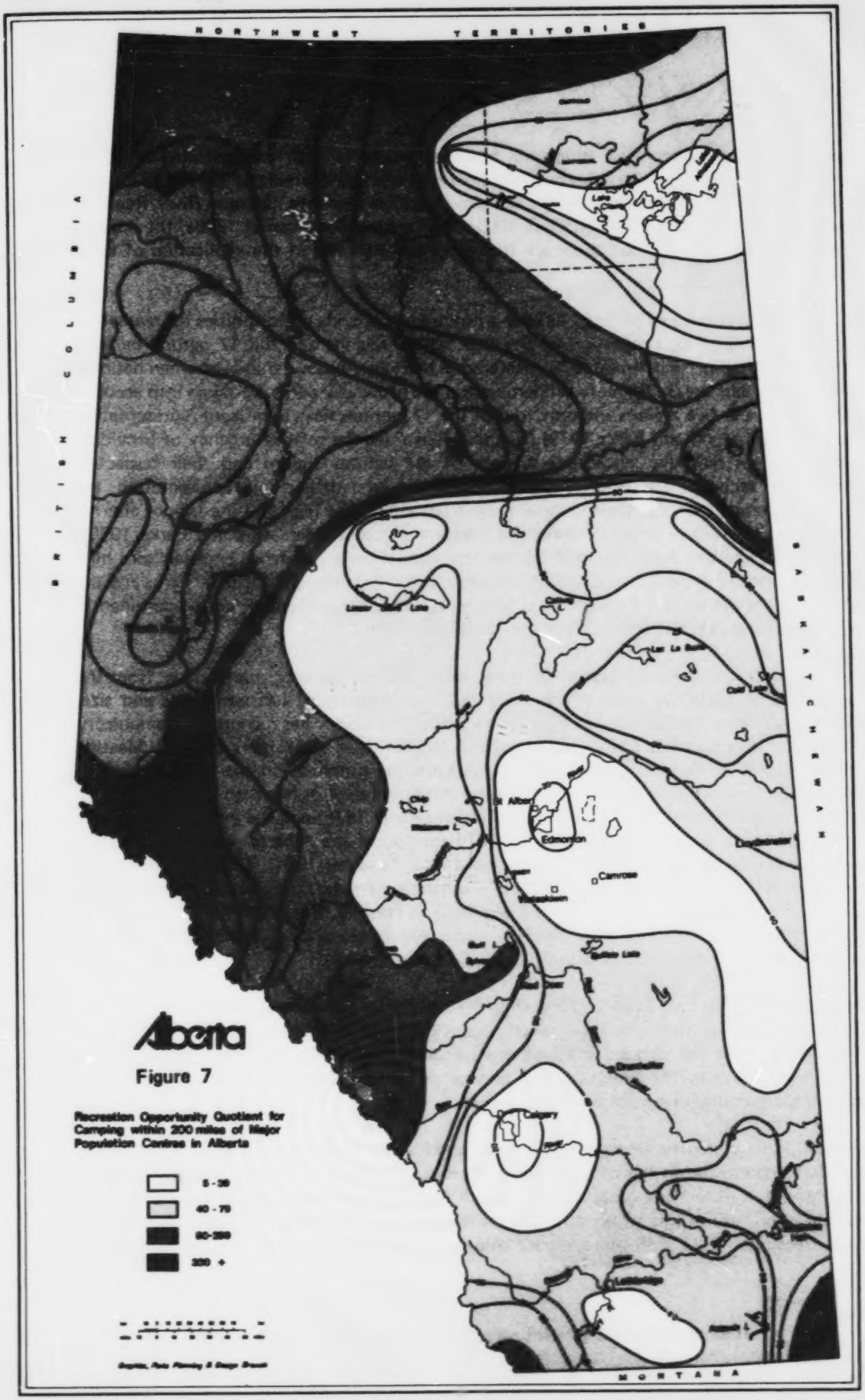
FIRST AID AVAILABLE IN MOST PARKS
• FACILITY PROVIDED

CAMPING LIMIT — 14 DAYS

PETS ON LEASH ONLY
N-ONLY NON-POWER BOATS ALLOWED

Source: Parks Division, Alberta Recreation and Parks

Figure 6. Alberta Provincial Parks Facility Chart (1982)


NORTHWEST TERRITORIES
BRITISH COLUMBIA
SASKATCHEWAN
MONTANA
Alberta
Figure 7
Recreation Opportunity Quotient for Camping within 200 miles of Major Population Centres in Alberta
5 - 39
40 - 79
80-399
399 +

concerns of the landowners. Reference has been made to such arrangements in policy documents prepared by the Alberta Government Recreation Committee (1972, 1974) and regional planning commissions within the province (for example, Oldman River Regional Planning Commission 1974, Red Deer Regional Planning Commission 1978a, the Alberta Land Use Forum 1976) but there are few concrete examples of the application of these ideas.

The purpose of provincial parks in Alberta is not only to provide opportunities for recreation but also to ensure representation of the five natural regions and the 17 natural sections (Alberta Recreation and Parks 1979). Reference to Figure 4 shows that even when national parks, wilderness areas, Willmore Wilderness and the provincial parks are taken into account only two of the five regions and only four of the 17 sections have significant representation (Alberta Recreation and Parks 1979). Figure 8 illustrates the relative urgency of providing protected representative landscapes in each of the natural regions and their respective constituent sections. The priority ratings reflect the level of existing representation, the degree of competition for these natural areas from alternative uses and the lack of alternatives to accommodate growing recreation pressure (Alberta Recreation and Parks 1979). Immediately evident from Figure 8 is the clear spatial correspondence between very high and high priority areas for establishing representative areas through provincial parks and the extent of the White and Yellow Areas which, as indicated previously, are predominantly in private ownership and form part of the "provincial farm."

The expansion of the park system in these areas will not be easy, particularly from the standpoint of acquiring areas which meet the requirements of representatives and size. Although Alberta Recreation and Parks as a government agency has recourse to compulsory purchase this option has never been exercised (D. Perraton 1981: pers comm.). Meeting the objectives in these areas will possibly require the purchase on the open market of suitable land as well as the application of new initiatives such as less than fee-simple acquisition of land for park purposes (see Coughlin and Plaut 1978) and the inclusion of private land within park boundaries. Prior to the 1974 revision of the Alberta Parks Act privately owned lands could be incorporated in Provincial Parks (Landals 1981). The reinstatement of this approach to enable the development of the park system may need to be reconsidered in specific instances where no alternative approach is feasible. Evidence from England and Wales, where national parks occur predominantly on private land, is indicative of what can be achieved (see Butler 1979a, Johnson 1971, Swinnerton 1981).

Complementing the wildland parks within the provincial park classification are the three wilderness areas of the White Goat Wilderness, the Siffleur Wilderness and the Ghost River Wilderness, under the jurisdiction of Alberta Recreation and Parks, and Willmore Wilderness under the control of the Alberta Forest Service. All these areas are located on the eastern edge of the mountain parks of Banff and Jasper.

In addition to wilderness areas, Alberta Energy and Natural Resources and Alberta Recreation and Parks cooperate on the natural areas and proposed ecological reserves program (Alberta Energy and Natural Resources 1981a), which includes representation of each of the 17 ecological or natural area sections. The Wilderness Areas Amendment Act 1981, was assented to in December 1981 with the amended title of "The Wilderness Areas, Ecological Reserves

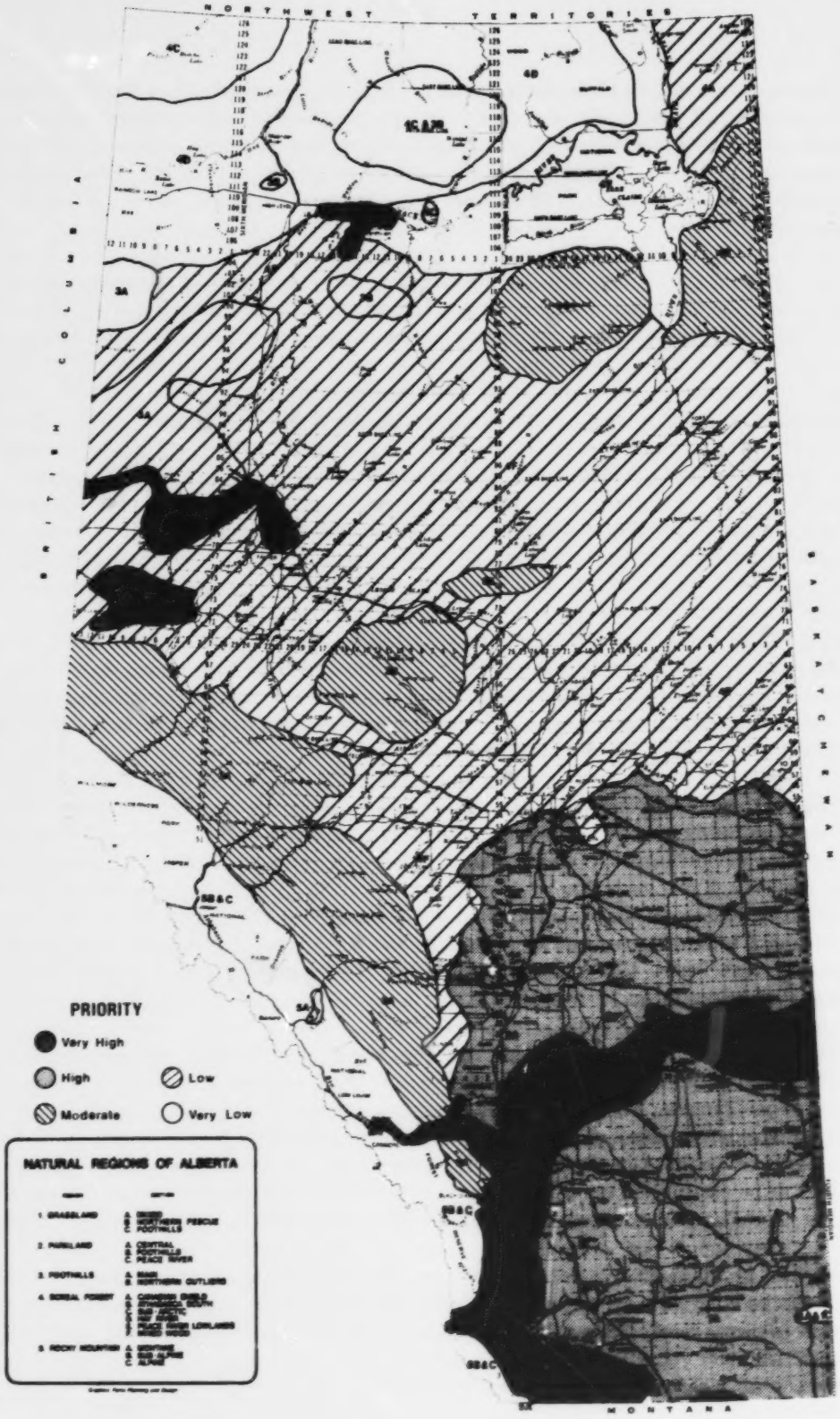


Figure 8. Natural Regions of Alberta: Priority for Establishment

and Natural Areas Act." Consequently, there is now formal recognition of ecological reserves and natural areas. Both of these categories of conservation areas occur on public land throughout the province (D. Griffin 1981: pers. comm.). Whereas the ecological reserves are intended primarily for scientific research, natural areas are subdivided into two groups, educational natural areas and recreational natural areas (Alberta Energy and Natural Resources 1981c).

In contrast to those components of the outdoor recreation open space system which emphasize the conservation or integrity of the resource end of the continuum, there are areas which are oriented towards accommodating more concentrated forms of outdoor recreation activities. These types of recreation space come under the general category of "recreation areas." Unfortunately, confusion arises over the use of this term because of the different categories of recreation open space involved (D. Perraton 1981: pers. comm., P. Skydt 1981: pers. comm.). Recreation areas include: (1) recreation parks or recreation areas which are one of the categories within the provincial park classification (Alberta Recreation and Parks 1979); (2) recreation areas which are "mini" parks in rural municipalities which are being funded by Alberta Recreation and Parks through the Recreation Areas Program (Alberta Recreation and Parks 1981b); (3) provincial recreation areas designated under the Provincial Parks Act and which include areas such as the highway campsites taken over from Alberta Transportation; (4) recreation areas involving basic facilities for both day use and camping which occur in the Green Area under the control of the Alberta Forest Service (Alberta Energy and Natural Resources n.d., B. Rogers 1981: pers. comm.); and (5) day-use recreation areas associated with water resource management projects which are owned and operated by Alberta Environment under its Site Development Program (T.L. Dykstra 1982: pers. comm.).

Included within the recreation component of the outdoor recreation/open space system is the concept of "recreation countries." This concept involves the provision of a diversity of recreation opportunities, a number of which are not permitted in provincial parks, over a substantial area. Kananaskis Country, for example, covers 1,919.6 square miles including the 117.3 square miles designated as Kananaskis Provincial Park (see Sadler 1978). The possible establishment of additional countries, modelled on Kananaskis, has been examined (Alberta Recreation and Parks 1979), including the Lakeland Country and a David Thompson Country Park (Edmonton Journal 1981).

Development of the outdoor recreation/open space system at the local level is largely the responsibility of the individual municipalities, although some funding is available through the provincial government. In the case of large urban centres such as Edmonton and Calgary the provision of extensive areas of open space can be provided within the urban setting. The large urban parks of Capital City Park in Edmonton and Fish Creek in Calgary will now be joined by parks to be established or upgraded under the urban parks program in Lethbridge, Medicine Hat, Red Deer, Grande Prairie, and Lloydminster (Alberta Recreation and Parks 1981a).

In the rural municipalities a new program has been initiated under the "recreation areas" Capital Works Program with the primary intention of providing additional recreation facilities such as picnic areas, playgrounds, and beach areas (Alberta Recreation and Parks 1981b).

One of the major problems associated with the development of parks at the local level is that municipalities or counties are reluctant to become involved because of the initial capital costs and the subsequent costs of operation and rectifying acts of vandalism (R. Hutchinson 1981: pers. comm., C. Primus 1981: pers. comm.). These problems are compounded in areas which are within convenient travelling distance from major urban centres. In these instances, recreation open space and associated facilities developed by small communities are used extensively by people from elsewhere including adjacent urban centres such as Calgary (Calgary Regional Planning Commission 1977a) or Edmonton (D. McLennan 1981: pers. comm.). These visitors do not contribute to the cost of the facilities and therefore impose a financial liability on the local councils (Oldman River Regional Planning Commission 1980).

A possible solution to this problem is the development of a regional parks system using the philosophy suggested by Ahrens (1977, p. 19):

> *The philosophy of Regional Parks is to provide, in a situation of contiguous municipalities, or neighbouring towns with rural "suburbs," for a system of parks based insofar as possible on natural attractions of significance mainly to the people of that region, and paid for, jointly, by the residents of the whole region from which the park draws most of its users.*

It would appear that in Alberta the various regional planning commissions are the logical administrative structure to begin instituting such a policy. Indeed, many of the commissions have made specific reference to the need for a regional approach to providing recreation opportunities associated with lake areas and valleys/corridors, sensitive natural areas and scenic uplands (see Calgary Regional Planning Commission 1977a, Edmonton Regional Planning Commission 1979, Oldman River Regional Planning Commission 1980, Peace River Regional Planning Commission 1976, 1978, Red Deer Regional Planning Commission 1981a). Unfortunately, there is frequently the problem that many of these areas are in private ownership (see Oldman River Regional Planning Commission 1980).

Priority needs to be given to the development of regional park systems, possibly similar to those adopted in British Columbia (Broome 1980, Capital Regional Planning Board 1969, Greater Vancouver Regional District 1978). Such systems would have considerable advantages, not only for the major urban centres in the province in meeting their recreation needs, but also in relieving some of the pressure on the rural municipalities and the rural landowner. The City of Edmonton and the provincial government have drawn attention to the need for a regional approach to parks provision (Edmonton Parks and Recreation 1972, 1978, Alberta Recreation and Parks 1979). The basis for a regional park system is in existence through established provincial parks and municipal parks. The requirement is better coordination between the various levels of government and agencies involved.

One final form of outdoor recreation/open space that requires attention is that of the reserve lands which are required during the subdivision process (see Rudge 1978). These reserve lands fall into two broad categories: environmental reserve which has to remain in a relatively natural state and the reserve land allocated to a municipal, school or municipal school reserve. With reference to the latter category, not only is the land acquired through this dedication barely sufficient to meet the neighbourhood needs (Calgary Regional Planning Commission 1977a), but the reserves may not be sited in the most suitable locations within

the community due to the lack of a comprehensive plan (Oldman River Regional Planning Commission 1980). There is also the tendency for rural municipalities to dispose of this reserve land and take cash-in-lieu because they are more oriented towards economic planning rather than land-use or environment planning (C. Johnston 1981: pers. comm., T. Sararas 1981: pers. comm.). In rural areas undergoing country residential development, reserve land accruing to municipalities from subdivisions is frequently left to go idle and become a detriment rather than a positive aspect of the landscape (Rudge 1977). Such areas could provide the basis for linear recreation open space and provide a useful function, not only for the local resident but also the recreation visitor to these rural-urban fringe environments. There would therefore appear to be a need to adopt a more positive functional approach to the use and management of this reserve land and in so doing, absorb some of the recreational pressure that could otherwise affect private land.

This review of the outdoor recreation/open space system in the province has revealed the diversity of forms in which it occurs. From a systems perspective, there appears to be a genuine attempt to develop a systems approach within each major component, but it is more difficult to discern a cohesion and integration between these different sectors.

The greatest priority for the expansion of the outdoor recreation/open space system is probably in the rural areas adjacent to the major centres of population (see Alberta Government Recreation Committee 1974). Whyte (1962), for example, has stated that the most important land to acquire for open space is that in proximity to centres of demand. Moreover, he suggested that the greatest opportunity to achieve this goal lay in the use of private land.

From the information available it would appear that increasing emphasis will be put on developing recreation open space in relatively close proximity to the urban centres such as in the form of day-use access sites within a 60-mile radius of major population concentrations (Alberta Recreation and Parks 1979). As far as the use of private land is concerned, its acceptance as part of the outdoor recreation/open space system is more difficult to identify in Alberta. While the use of agricultural land for recreation obviously takes place there appears to have been a reluctance to date to make use of its full potential. In part this is probably due to the considerable range of alternative outdoor recreation settings available within the public sector. However, it is becoming increasingly evident that with the growing demand for outdoor recreation, the realization of the potential of this recreation resource base is likely to become increasingly important. The Alberta Government Recreation Committee (1974, p. 22) has noted that with the increasing demand being put on public land adjacent to urban centres "there is therefore, a need to find ways of bringing private land into use for recreation purposes." Before examining the existing and potential role of agricultural land in accommodating recreation use, attention must be focussed on existing and possible future patterns of recreation participation.

Levels of Participation in Outdoor Recreation

The impact of recreation on agricultural land is a reflection in part on the number of participants in the different recreation activities which make use of farmland as recreation space. A brief examination of the changing patterns of recreation activity is therefore in order. At the national level a number of surveys have provided data relating to existing levels of participation, time series data and projections into the future (Parks Canada 1973, 1976, 1977; Statistics Canada, 1978, 1979).

Participation at the National Level Table 10 provides an indication of the levels of participation in selected outdoor recreation activities that take place in the rural environment and could quite likely involve the use of agricultural land in a direct or indirect way. From these data and others compiled by Parks Canada it is evident that levels of participation in a variety of recreation activities have increased substantially since the early 1960s, although the rates of increase vary between different activities. In addition, the higher levels of participation recorded for the western region in a number of activities are worthy of mention. An alternative index to levels of participation is the ownership of recreation equipment, although possession of the equipment can only be used as a surrogate measure for actual use of the equipment. Substantial increases in the ownership of certain items of recreation equipment such as bicycles, cross-country skis, and camping equipment contrast with the more modest growth in the proportion of Canadian households which possess snowmobiles and boats. The percentage of households owning vacation homes has declined since the early 1970s (Table 11).

Reference has already been made in this report to those factors that influence recreation demand and the anticipated outcome that participation in outdoor recreation activities will continue to increase. Table 12 provides an indication of this projected growth for 11 outdoor recreation activities.

Participation in Outdoor Recreation in Alberta An overview of leisure behaviour patterns in Alberta has been undertaken by Conrad and Curran (1978). Attention is therefore restricted to a selective review of participation levels in outdoor recreation.

Prior to examining participation levels in outdoor recreation activities it is important to remember that involvement in these activities accounts for only a relatively small proportion of the leisure behaviour patterns of most people. The significance of this relationship is afforded by Table 13 which shows participation levels in a broad range of activities.

The emphasis on those activities which are not particularly demanding from an intellectual or physical standpoint is particularly noticeable. Dyer (1981: pers. comm.) has suggested that the figures in Table 13 probably underestimate the amount of participation that takes place in highly repetitive activities which do not require much preparation or coordination, such as listening to the radio or watching TV, in comparison with those activities which require a distinct commitment. The emphasis on relatively passive forms of outdoor recreation, including driving for pleasure, walking and picnicking is also a distinctive feature and one which has been noted in other surveys undertaken in Alberta (see Jackson 1980). One further comment is that if attention is focussed on the rate of participation per 1000 population, the level of involvement, other than for a limited number of the relatively passive and home oriented activities, is not particularly high. This finding is not surprising bearing in mind Burton's (1976) comment that the use of the term "mass leisure" refers to the wide range of leisure activities for which opportunities are available rather than a high degree of participation by the majority of Canadians. Nevertheless, the limited time series data that are available do tend to suggest increasing participation in those pursuits that do require active commitment on the part of the participant.

An indication of the level of participation is provided in Table 14 for a range of outdoor recreation activities. The level of participation is based on the number of days household

TABLE 10

Participation levels in selected outdoor recreation activities in Canada and the Western Region by year of study

	Canada				Western Region+			
	1967	1969	1972	1976	1967	1969	1972	1976
Activity	Number of Participants*							
Tent Camping	132	122	188	192	192	151	244	243
Trailer Camping	64	56	98	120	87	66	141	119
Camping with pick-up camper	-	22	37	85	-	53	105	186
Canoeing	48	80	95	141	39	58	103	121
Driving for Pleasure	-	668	633	658	-	648	642	595
Sightseeing from Vehicle	-	-	365	491	-	-	536	606
Cross-Country Skiing	-	-	19	103	-	-	18	62
Picnics or Cookouts away from home	398	540	524	567	454	622	568	590
Walking or Hiking for Pleasure	130	374	379	541	148	403	411	535
Bicycling	-	125	188	284	-	132	215	221

Source: Parks Canada (1977)

Notes:

+Western Region encompasses British Columbia and Alberta and corresponds to the administrative region of Parks Canada.

*Number of participants per thousand population 18 years and over.

TABLE 11

Ownership of selected recreation equipment by Canadian households*

Recreation Equipment

Year	Snowmobiles	Outboard Motors	Boats	Bicycles	Camping Equipment	Vacation Homes	Snow Skis	Down Hill	Cross-Country
1971	7.3	10.5	12.4	-	17.9	-	-	-	-
1972	8.3	11.8	-	27.9	-	-	-	-	-
1973	9.3	-	-	29.1	-	7.2	-	-	-
1974	9.3	10.3	13.5	30.3	21.4	7.3	-	-	-
1975	10.0	-	-	-	-	-	-	-	-
1976	9.9	-	14.1	39.0	23.6	6.9	-	-	-
1977	10.1	-	-	-	-	-	-	-	-
1978	9.7	-	14.8	41.9	27.0	6.5	25.5	14.2	16.9
1979	-	-	-	-	-	-	-	-	-
1980	9.7	10.5	15.5	44.1	27.0	6.3	30.9	15.1	22.8

Source: Butler (1981, Table 4), Original Source - Statistics Canada

Notes:
* Figures indicate percentage of households owning one or more of the items identified.

Information was collected only for the years for which data appear in the Table.

members participated in selected activities during the past 12 months (1979). The table complements the data presented in Table 13 while at the same time giving a clearer indication of the level of commitment to certain activities. However, the statistics in both tables should be interpreted as providing only a general indication of the levels of participation in selected recreation activities.

During the discussion on the outdoor recreation/open-space system in Alberta reference was made to the important contribution that national parks and provincial parks make to the total supply of recreation space. The next two Tables (Table 15 and Table 16) provide an indication of the levels of use that these areas receive. Table 15, showing the number of visitors to national parks in Alberta, provides a clear indication of the increasing numbers of Albertans and tourists who visit these parks. In contrast, Table 16, which relates to user statistics for the provincial parks in Alberta, shows a slight decline in park users between the 1979 and 1980 figures.

Ownership of recreation equipment at the national level has already been referred to as a supplementary information source for providing an indication of participation in outdoor

TABLE 12

Projected growth in number of participants 10 years of age and over in selected activities

Year	Activities										
	Bicycling	Snowmobiling	Cross-Country Skiing	Driving for Pleasure	Driving for Sightseeing	Tent Camping	Trailer Camping	Pick-up Camper	Hiking and Walking	Swimming	Picnicking
	Millions of Participants										
1972	7.1	3.7	0.5	11.2	6.6	3.9	1.9	0.63	7.7	11.6	10.4
1975	7.6	4.0	1.0	12.1	7.2	4.2	2.1	0.73	8.6	12.1	10.5
1980	8.2	4.2	2.0	13.2	8.1	4.5	2.4	0.81	9.3	13.0	11.7
1985	8.6	4.4	2.2	14.2	8.8	4.7	2.6	0.90	9.9	14.0	12.7
*	1.5%	1.4%	12.0%	1.8%	2.3%	1.6%	2.6%	2.6%	1.9%	1.5%	1.5%

Source: Parks Canada (1976, p. iii).

Note:

*These percentages are the average yearly compounded growth rates from 1972-1985. The participation rates for all activities except cross-country skiing are based on socio-economic projections. For cross-country skiing the projections are a time series estimate.

recreation (see Table 11). Relevant statistics for Alberta are provided in Table 17 which shows, not surprisingly, the high proportion of households that own tents relative to other types of equipment. Although caution has to be exercised in comparing the relevant national figures (Table 11) with the provincial figures (Table 17) for corresponding types of equipment, the higher response rates in favour of Alberta for snowmobiles and camping equipment is one aspect worthy of mention. However, there is the possibility that the Alberta figures are slightly inflated (Alberta Recreation, Parks and Wildlife n.d.).

With the exception of the data relating to park visitor levels, no indication has been provided on the location and types of environment in which the outdoor recreation activities being examined take place. These two dimensions of recreation behaviour patterns are of critical concern to recreation planners (Mercer 1974) and are of specific relevance to the recreational use of agricultural land. The relative importance of the inherent attractiveness or capability of a site for recreation in relation to its proximity or access, expressed as a distance factor between the place of origin and destination, is an important consideration in explaining the spatial characteristics of recreation behaviour patterns (see Ross 1973).

TABLE 13

Estimated number of Albertans participating in selected recreation activities (1980)

Activity	Number of Participants in 1980	Rate per Thousand Population
Visiting Friends	1,735,302	829
TV	1,727,399	825
Radio	1,705,855	815
Dining Out	1,602,024	765
Driving for Pleasure*	1,479,517	706
Board Games	1,444,587	690
Walking*	1,440,416	669
Reading	1,380,083	659
Picnicking*	1,376,514	657
Movies	1,322,909	632
Being a Spectator	1,178,858	563
Camping*	1,109,446	530
Museum	1,106,068	528
Dancing	1,092,364	522
Crafts	1,021,932	488
Gardening	1,005,870	480
Swimming*	996,446	476
Bicycling*	924,411	441
Organizations	894,394	427
Skating*	826,380	395
Frisbeeing	750,011	358
Boating*	735,515	351
Fishing*	717,832	343
Jogging*	666,049	318
Video Games	664,737	317
Drama	582,195	278
Bowling	569,319	272
Calisthenics	535,410	256
Baseball	498,059	238
Downhill Skiing*	440,015	210
Rollerskating	385,049	184
Tennis	355,920	170
Cross-Country Skiing*	324,675	155
Golf	297,017	142
Raquetball	282,556	135
Hockey	263,371	126
Curling	257,571	123
Badminton	254,447	122
Hunting*	251,515	120
Football	243,433	116
Backpacking*	240,233	115
Soccer	212,124	101
Skateboarding	149,400	71

Source: Alberta Recreation and Parks, Research and Systems Branch (1981).

Notes: Unpublished material based on results from Alberta Recreation and Parks *Public Opinion Survey on Recreation.*

* Activities which may result in a direct or indirect impact on agricultural land.

TABLE 14

Frequency of participation by Albertans in selected outdoor recreation activities*

Activity	No Days+ Number	%	1-5 Days Number	%	6-20 Days Number	%	20 Days Number	%	No Answer Number	%
Walking for Pleasure	891	28.0	678	21.3	590	18.5	986	30.9	41	1.3
Swimming	931	29.2	631	19.8	855	26.8	730	22.9	39	1.2
Picnics	1029	32.3	1257	39.5	610	19.1	258	8.1	32	1.0
Skating	1477	45.4	622	19.5	542	17.0	508	15.9	37	1.2
Bicycling	1561	49.0	422	13.2	428	13.4	735	23.1	40	1.3
Fishing	1568	49.2	776	24.4	530	16.6	277	8.7	35	1.1
Nature Walks	1612	50.6	835	26.2	400	12.6	307	9.6	32	1.0
Hiking	1999	62.7	758	23.8	287	9.0	118	3.7	24	0.8
Tobogganing	2087	65.5	618	19.4	321	10.1	136	4.3	24	0.8
Tent-Camping	2099	65.9	591	18.5	356	11.2	115	3.6	25	0.8
Downhill Skiing	2139	67.1	428	13.4	371	11.6	221	6.9	27	0.8
Cross-Country Skiing	2258	70.9	400	12.6	334	18.6	169	5.3	25	0.8
Motor Boating	2321	72.8	405	12.7	262	8.2	171	5.4	27	0.8
Horse Riding	2441	76.6	425	13.3	137	4.3	156	4.9	27	0.8
Canoeing	2483	77.9	436	13.7	167	5.2	76	2.4	24	0.8
Snowmobiling	2494	78.3	310	9.7	176	5.5	182	5.7	24	0.8
Water Skiing	2538	79.7	336	10.5	177	5.6	107	3.4	28	0.9
Icefishing	2668	83.7	315	9.9	130	4.1	49	1.5	24	0.8
Trailer Camping	2748	86.3	113	3.5	155	4.9	147	4.6	23	0.7
Truck-Camper Camping	2752	86.4	165	5.2	148	4.6	97	3.0	24	0.8
Backpacking	2765	86.8	256	8.0	110	3.5	30	0.9	25	0.8
ATV Use	2783	87.4	176	5.5	101	3.2	98	3.1	28	0.9
Motor Biking	2804	88.0	157	4.9	90	2.8	109	3.4	26	0.8
Tent Trailer Camping	2833	88.9	126	4.0	138	4.3	70	2.2	19	0.6
Rowboating	2861	89.8	184	5.8	77	2.4	40	1.3	24	0.8
Van Camping	2893	90.8	118	3.7	97	3.0	57	1.8	21	0.7
Snowshoeing	2922	91.7	190	6.0	38	1.2	17	0.5	19	0.6
Sailing	2959	92.9	139	4.4	39	1.2	28	0.9	21	0.7
Motorhome Camping	2968	93.2	66	2.1	53	1.7	74	2.3	25	0.8

Source: Alberta Recreation Parks and Wildlife (n.d.) Annual General Survey 1979-80.

Notes:

*Participation in the past 12 months.

+Number of days household members participated.

TABLE 15

Number of visitors to national parks in Alberta 1975/76-1980/81

Park	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81
Banff	2,870,113	3,059,655	3,040,769	3,163,876	3,642,928	3,772,459
Jasper	1,585,738	1,605,505	1,713,670	1,770,872	1,849,632	1,946,600
Waterton Lakes	346,081	478,403	589,264	648,890	671,110	671,442
Elk Island	189,851	358,085	408,107	402,118	385,387	438,956
Rocky Mtn. House*	19,521	22,129	22,171	20,603	26,752	25,202

Source: Parks Canada, Western Region Office, Calgary (1981).

*Rocky Mountain House is a National Historic Park.

Notes:

The annual period extends from April 1 to March 31 each year.

Although Wood Buffalo National Park is located in both Alberta and the Northwest Territories it was visited by only 278 Albertans in 1975 (Alberta Recreation and Parks 1979).

Unfortunately, data collected by Alberta Recreation and Parks, some of which were used in compiling Tables 13 and 14, make no reference to the location and type of environment in which the activities take place. For the most part, therefore, the geographical patterns of recreation participation have to be based on generally recognized spatial patterns of recreation behaviour and a limited number of case studies. Some indication of these patterns is afforded by material being collected by the respective regional planning commissions as part of the background material to the preparation of their regional plans. An additional source is the findings included in the tourism area studies being coordinated by Travel Alberta (see IBI Group 1979; InnTrec Group Ltd. 1981; Marshall, Macklin, Monoghan Ltd. 1979; MTB Consultants Ltd. 1979, 1980).

A number of recreation activities require specific types of environmental setting in which to take place and, as a result, the geographical patterns of participation in these activities are determined predominantly by the location of specific resources. Examples would include specific water-based activities and backcountry hiking and camping. For the most part, however, a variety of settings and their respective locations exist which are capable of attracting and sustaining different types and levels of recreation activity. As a result, patterns of recreation activity do not appear to differ markedly from one part of the province to another.

TABLE 16

Alberta Provincial Parks: user statistics* 1979 and 1980

Types of Users	1979**			1980		
	Total	Weekday	Weekend	Total	Weekday	Weekend
VEHICLES	1,106,445	658,170	448,275	1,121,917	667,354	454,563
Day Use	845,465	546,852	298,613	863,409	552,434	310,975
Camping	260,980	111,318	149,662	258,508	114,920	143,588
PARK USERS	4,057,571	X	X	3,787,793	X	X
Day Users	3,126,587	2,126,539	1,000,048	2,903,431	1,977,408	926,023
Camping Party Nights	283,331	119,487	163,844	281,945	124,261	157,684
Individual Camper Nights	930,984	X	X	884,362	X	X
AVERAGE PARTY SIZE						
Day Users	3.39	X	X	3.29	X	X
Camping	3.28	X	X	3.13	X	X
AVERAGE DAILY OCCUPANCY	X	27%	77%	X	22%	62%

Source: Alberta Recreation and Parks (1981d, p. 179).

Notes:

*Summer Season (May 15 to September 15 inclusive)

**Figures as presented in 1979 Report

TABLE 17

Ownership of selected recreation equipment by Albertan households

Equipment	Ownership of one or more		No Ownership		No Answer	
	Number	percent	Number	percent	Number	percent
Trail Bikes	346	11.0	2,783	87.4	57	1.8
Four-Wheel Drive	266	8.3	2,862	89.9	58	1.8
Snowmobile	443	14.0	2,687	84.3	56	1.8
Row Boat	308	9.7	2,823	88.6	55	1.7
Motor Boat	417	13.1	2,713	85.2	56	1.8
Water Skis	261	8.2	2,869	90.1	56	1.8
Tent	1,370	43.0	1,761	55.3	55	1.7
Tent-Trailers	277	8.7	2,854	89.6	55	1.7
Truck-Camper	347	10.9	2,783	87.4	56	1.8
Trailer	348	10.9	2,782	87.3	56	1.8
Van used for Camping	234	7.3	2,896	90.0	56	1.8
Motor Home	117	3.7	3,013	94.6	56	1.8
Vacation Cottage	243	7.6	2,886	90.6	57	1.8

Source: Alberta Recreation, Parks and Wildlife (n.d.) Annual General Survey 1979-80.

The observed geographic or spatial patterns of outdoor recreation largely conform to a spatial order which is a function of the availability of resources and effective demand and which is determined by the time available for recreation. Consequently, the spatial patterns of recreation behaviour have frequently been explained in the context of distance-decay curves which suggest that as the distance (cost and time) of travel away from the point of origin (urban centre) increases, there are often distinct break points which reflect the average limits of day and weekend recreation travel. The concept of the urban recreation hinterland incorporates this relationship (see Barker 1978, Mercer 1970, Woolmington and Hart 1977). However, the validity of the traditional distance-decay function has been questioned by Elson (1976) who has suggested that the level of knowledge of existing recreation opportunities is an important factor in explaining the spatial patterns of recreation behaviour. In addition, Greer and Wall (1979) have noted that the distance-decay function associated with recreation travel patterns is in part compensated by the wider range of recreation settings that are available further from the city. The result is a cone of visitation based on the interaction of demand and supply. Moreover, different recreation hinterlands and their respective peakings of visitation occur for different types of recreation (Greer and Wall 1979).

Evidence from Alberta suggests that the effective day recreation hinterland is likely to be contained within a radius of 50-75 miles or within one to one and one-half hours driving time of urban centres (Alberta Recreation and Parks 1979, Nowicki 1969, Rigby 1966, Roberts 1968, Younie 1975). There are distortions to this general pattern because of the specific resource requirements of different recreation activities (see Duffield and Coppock 1975) and variations in highway networks. For weekend travel Nowicki (1969) found that 150 miles or three hour drive hinterlands were most frequently reported by campers and fishermen. Levels of recreational use of a particular area of rural Alberta are therefore an expression of the quality of the recreation setting, the types of recreation activities and experiences it provides, its accessibility to potential user populations, and the existence of any suitable intervening opportunities that may accommodate demand in closer proximity to the point of origin of the recreation trip.

Closely associated with, and partly responsible for the spatial patterns of demand is the factor of time. Particularly relevant in this regard is the availability of discretionary time during the week, as opposed to the weekend or vacations, so that patterns of recreation demand are distributed unevenly both in time and space. Within this structure it is important to recall the distinction that Clawson and Knetsch (1971) made between user oriented and resource based recreation areas (Table 3). While the terms "user oriented" and "resource based" are a little misleading (see Chubb and Chubb 1981) recognition of these different levels of opportunity is important. On this basis, considerable areas of agricultural land may be considered as user-oriented recreation resources because of their proximity to centres of population and, therefore, their convenience for recreational use. As a result, the use of agricultural land for recreation is in many instances not so much a reflection of its inherent capability for recreation but rather a reflection of the area's accessibility and convenience for the recreationist. This characteristic of recreation use patterns was mentioned by respondents from both the recreation and agricultural interest groups interviewed as part of this study.

Another dimension of time that is important in explaining the types and levels of recreation activity are the seasons and their respective climatic regimes (see Simpson-Lewis *et al.* 1979). One of the most distinctive features of outdoor recreation in Canada is involvement in winter recreation activities (Burton 1976), an aspect which is recording increasing levels of participation (see Table 10) and commitment by recreation agencies. In an indirect way the seasonal phenomenon is also important in terms of hunting and the agricultural practices that occur on the land at certain times of the year: factors which are important in accounting for the nature of the changing agriculture-recreation interface.

Future Levels of Recreation Participation A general indication of future levels of participation in selected recreational activities for Canada as a whole was presented in Table 12. The analysis of the factors of recreation demand in Alberta clearly showed a trend in a positive direction. Even if there were no changes in the socio-economic characteristics of the population which influence demand, the near doubling of the province's population by the end of the first decade of the next century would be sufficient to create a demand for additional opportunities for recreation.

Surveys undertaken in Edmonton (Edmonton Parks and Recreation 1978), and the Peace River Region (Peace River Regional Planning Commission 1974), for example, show a continuing demand for spontaneous and informal outdoor recreation activities. A similar pattern has been noted in the United States (U.S. Department of the Interior 1979). In a number of instances, however, these preferences or latent demand will not be transformed into effective demand or participation because of inhibiting factors such as lack of free time or available income, limitations of supply (R. Shillington 1981: pers. comm.) and lack of awareness of recreation opportunities. Knetsch (1974) has suggested that levels of increased involvement in outdoor recreation activity will be determined to a large extent by the availability of supply. Moreover, Sadler (1978) anticipates that at least a doubling in outdoor recreation activity is likely by the turn of the century in Alberta. Furthermore, Butler (1981) has warned that it would be naive not to expect that new recreational activities or equipment will be developed in the near future which will put further demands on the resource base.

Impacts from Outdoor Recreation The impacts of tourism and outdoor recreation on the resource base have traditionally been divided into three categories: (1) environment; (2) economic; and (3) social (see Figure 2). Butler (1981) in examining the impact of recreation on rural land has adopted the following five categories: (1) environmental; (2) economic; (3) social; (4) legal; and (5) other change in the status quo. Cullington (1980a) has used a similar approach in her analysis of the recreational use of private land when she identified four areas of concern: (1) legal; (2) economic; (3) social; and (4) ecological.

The environmental impact of recreation is the form that has been most extensively studied in the recreation literature (see Eagles 1981, Guertin 1975, Wall and Wright 1977). However, Butler (1981) points out that these and other studies, with the exception of that of Guertin (1975), have tended to concentrate on impacts in natural or wildland areas. The severity of the impact on the environment is a function of the type or nature of the recreation activity, the intensity of the activity and its duration. In the context of the recreational use of agricultural land, these factors are obviously important because of the multiple-use context

within which much of rural-based recreation takes place. Problems frequently referred to include disturbance of livestock, erosion of trails and the banks of waterways, damage to crops, the loss of vegetation and the disturbance of wildlife habitats (Ironside 1971).

The social and economic impacts of recreation are frequently examined together as one closely interconnected problem (see MacMillan, Lyon and Brown 1976, Pigram 1980). Not infrequently the economic benefits associated with the development of recreation opportunities in an agricultural setting or rural environment (see Baker 1966, Canadian Council on Rural Development 1975a, Cavendar 1963, Dartington Amenity Research Trust 1974, Edminster 1962, U.S. Department of Agriculture 1962, Vogeler 1977) have to be considered against the social costs caused by adjustments in the way of life of the farm family (see Burton 1967, Bull and Wibberley 1976, Canadian Council on Rural Development 1975b, Dartington Amenity Research Trust 1974) and the broader rural community (Guertin 1975 and Taylor 1975). To a considerable extent, the social impacts of recreation result from the interaction of the rural residents and the influx of visitors with different attitudes and perceptions of the role of the rural environment (see Abt Associates Inc. 1976, Braithwaite and Wright 1975, Butler 1979b, 1981). The different attitudes and value systems between the rural resident as opposed to the recreationist or tourist are a common theme in the literature and Manning (1975) has stressed the importance of this behaviour component in his examination of leisure-oriented living in the rural-urban fringe.

The legal issues associated with the recreational use of rural land are predominantly related to problems of occupiers' liability and trespass and access (Butler 1981). These problems become more intense with the greater numbers of people wishing to use agricultural land for informal outdoor recreation.

One final point that needs to be made within the context of the impact of recreation on the rural environment is recognition of the potential conflict among users of outdoor recreation resources. Jacob and Schreyer (1981, p. 370) have derived four major classes of factors which produce conflict in outdoor recreation: (1) activity style – the various personal meanings assigned to an activity; (2) resource specificity – the significance attached to using a specific recreation resource for a given recreation experience; (3) mode of experience – the varying expectations of how the natural environment will be perceived; and (4) lifestyle tolerance – the tendency to accept or reject lifestyle different from one's own. They (Jacob and Schreyer 1981) point out that any one factor may cause conflict but that most instances entail a combination of them. Specific examples of these conflicts will be included in a subsequent part of the report when dealing with the informal use of agricultural land by different recreation activity groups.

CHAPTER II

RECREATION ON AGRICULTURAL LAND: PROSPECTS AND LIMITATIONS

Whatever may be the future demand for land water for outdoor recreation, and however far government at all levels may go in providing what is needed, it seems clear that greater use must be made of private lands for outdoor recreation – especially for the ... land-ownership-use situations ... where one person or company owns the land and others use it.

(Clawson n.d., p. 39)

Privately held lands are not a public resource. Trail users should not feel that they have a basic right – a God-given freedom – to move wherever they wish to go. Our farm land was not given to us by God. We bought it with hard earned dollars...

(Ontario Trails Council 1977, p. 28)

INTRODUCTION

These two quotations provide a vivid indication of the contrasting viewpoints on the use of agricultural land and, more specifically, private land for recreation purposes. Clawson's (n.d.) statement reflects the perspective of a land-use planner in the United States whereas the quotation taken from the *Final Report* of the Ontario Trails Council (1977) demonstrates the attitude and strength of feeling included in a submission to the Council by an Ontario landowner. Although neither of these two quotations is directed specifically at the situation in Alberta, the contrast in views is almost certainly applicable to the polar positions of a spectrum of attitudes towards the use of agricultural land for recreation which exist in the province.

The examination of the outdoor recreation system in Alberta revealed that an undetermined amount of outdoor recreation takes place on land not specifically designated to this type of use (Alberta Recreation and Parks 1979, Sadler 1978) and that the situation is by no means restricted to this province (Butler 1981, Cullington 1980a, 1980b; Interdepartmental Task Force on Land Use Policy 1980, Outdoor Recreation Sector Group 1975). Because of changing patterns of recreation demand and constraints on meeting this demand in the traditional manner, increasing consideration needs to be given to the role of agricultural land, and specifically the private sector, as a component of the outdoor recreation/open space system (Alberta Government Recreation Committee 1974).

The purpose of this section of the report is to provide a link between the broad overview of outdoor recreation in Alberta and the more specific analysis of the nature of the current interface between recreation and agriculture in the province. This objective is achieved in two phases. The first phase consists of a selective review of the arguments advanced most frequently for explaining the attraction of farmland for outdoor recreation, as well as some of the problems involved. Part of this discussion includes specific reference to those factors which influence the availability of private agricultural land for recreation.

The second phase concentrates on providing a background statement on the use of agricultural land for recreation in Alberta. This overview is based predominantly on Pattison's (1974) report entitled *A Study on the Use of Agricultural Land for Recreational Purposes*

which was prepared as a contribution to the report of the Alberta Land Use Forum in the mid-1970s. Attention is also focussed on the Alberta Land Use Forum's (1976) *Report and Recommendations* in those instances where the content relates to the recreational use of agricultural land. The two earlier reports not only provide a statement of the nature of the recreation-agriculture interface in the first half of the 1970s, but they also provide the opportunity for reflecting on possible changes that may have taken place since that time, as well as the extent to which the public and private sector have responded to the issues and recommendations raised by the Alberta Land Use Forum (1976).

REASONS FOR THE RECREATIONAL USE OF AGRICULTURAL LAND

The recreational use of agricultural land results from a variety of factors which for convenience may be conceptualized as having either a predominantly "push" or "pull" effect. However, in reality these factors rarely exist in isolation and more often than not occur in a combination of both "push" and "pull" forces.

One of the most frequently mentioned pull reasons behind the value of agricultural land for recreation is its proximity relative to the user population. In other words, because agricultural land accounts for a large proportion, in land-use terms, of the hinterland of most urban centres, it provides an effective supply of open space (Cullington 1980a, 1980b; Kozicky 1964, Phillips and Roberts 1973, Otten and Highsmith 1977) and offers a solution in part to the fear of running out of space for informal recreation (see Gottmann 1964). Not infrequently the recreation potential of the rural-urban fringe, and particularly its agricultural component, is largely based on this accessibility factor (see Molnar 1973, Phillips and Veal 1979, Russwurm 1977a, Travis and Veal 1976), although the locational advantage of the agricultural land base relative to more distant recreation resources, such as the mountain national parks or the Green Area in Alberta, extends beyond the immediate periphery of this fringe area. Russwurm (1977a, p. 49) cogently argues the point that "a local resource though not of high quality on a national scale will be peculiarly valuable if no other resources exist."

A second major attribute of agricultural land as a recreation resource is the unique contribution that it can make to the outdoor recreation/open space system. Ironside (1971, p. 1) has noted that "urban open space is not sufficiently large or varied to provide all types of recreation demanded by people." As a result, the desire for more "personal recreation territory" is reflected in the increasing use of rural agricultural and wilderness areas. However, wilderness areas present too much of a challenge both physically and mentally for a considerable proportion of the population (Ironside 1971) and therefore the rural environment with its integration of the natural and man-made landscape provides a useful compromise between the extremes of the open-space system.

Closely associated with the previous point is the importance of the agricultural landscape as a functional cultural environment and part of one's heritage (Bryant and Russwurm 1979). Vogeler (1977) in discussing farm and ranch vacationing in the United States draws attention to the fact that one of the attractions of the agricultural environment as a recreation resource is that it includes local people with their distinctive lifestyles. Adding support to this perspective is Whyte (1962, p. 19) who suggests that:

> *They [the public] do want parks, but intuitively, it is the living, natural countryside they seek... To present open space action almost purely in terms of conventional park acquisition does not touch this nerve, and the vision of institutionalized open space that it conjures up is a somewhat sterile paradise.*

The amenity value of the "working" countryside is strongly entrenched in the provision of opportunities for outdoor recreation in Britain (Butler 1979a, Davidson and Wibberley 1977, Dower 1972). The humanized landscape of the national parks which has been largely created and maintained by agriculture is one of the basic reasons for their appeal to the indigenous population, the recreationist and the tourist (Johnson 1971, Leonard 1980, Phillips and Roberts 1973, Sayce 1980). Indeed, the National Farmers' Union in England and Wales (1979) has recognized that the countryside as a whole is a recreation resource.

Troughton (1974) and Getz (1975) have considered the relevance of the amenity value of the countryside concept to rural and recreation planning in Canada. However, its acceptance and application is not a straightforward matter because of the fundamental difference in perception and attitudes toward the countryside as a recreation resource held by the general public and by recreation and park agencies within government in Canada. Butler (1980) has remarked that in Ontario the countryside is perceived as somewhere to drive through in order to get to a specifically designated recreation resource site. Certainly, from the agency perspective, the traditional approach to recreation provision, largely because of abundant land space in the public sector, ease of management and the strong natural area theme of parks, has resulted in exclusion or removal of the functional and human landscape within a park setting.

A further dimension which perhaps helps to explain the more limited interpretation of recreation resources found in Canada (see Getz 1975) is related to the level and recent history of urbanization. Krueger (1974, p. 78) has observed that "the value of the countryside as an amenity value comes from the urban component of society, not the rural, and in Southern Ontario we haven't been urban long enough to appreciate the countryside." On the basis of this argument and bearing in mind the level and historical evolution of urbanization in Alberta relative to Ontario, there is the basis for suggesting that the general acceptance of countryside and the agricultural landscape as a recreation resource will not find wide appeal in the near future, unless promoted by government as a clearly articulated recreation policy.

It is also important to bear in mind that certain types of recreation, including hunting and fishing, are intimately associated with agricultural land and the farming community because of their traditional role as part of a rural livelihood and life style. Even though involvement in these activities has changed from predominantly one of necessity to that of a recreational experience, the attachment to the land base remains. Particularly significant in this regard is the fact that agricultural areas are the only habitat for many species of wildlife and are therefore an attraction for both hunters and fishermen.

Hunting is excluded from national and provincial parks within Alberta but occurs throughout the Green Area and the rural land within the White and Yellow Areas. Another recreation activity which utilizes agricultural land partly because of its exclusion from park areas is snowmobiling.

A further attraction of the countryside for recreation is its aesthetic qualities (Ironside 1971) and the inspirational enjoyment associated with the value of landscape as a backdrop to both active and passive recreation pursuits (Canada Department of Regional Economic Expansion 1969, Hills 1961). Particularly relevant in this context is the importance of driving for pleasure and the opportunity provided for the enjoyment of landscape when moving through it (Keenleyside 1974) - a dimension which has been incorporated in the ecotour concept (see Canadian Forestry Service 1978).

Many types of outdoor recreation are what Christiansen (1975, p. 89) has referred to as "kinetic recreational experiences... which are rewarding due in a large degree to the motion through an area... " whether it is land, water, or air based. This linear requirement which is characterized by activities such as snowmobiling, cross-country skiing, hiking, horseriding, bicycling, trail biking, and four wheel driving on land, and canoeing and rafting on water, is not easily accommodated in the predominantly nodal recreation resources provided by parks. In contrast, the provision of trails across farmland or river corridors offers another dimension to the recreation open space system (Cullington 1980a, 1980b).

Probably one of the strongest push factors leading to the increased use of agricultural land for recreation is a decline in the quality of the recreation experience acquired in conventional recreation destination areas such as the national and provincial parks. Negative factors frequently mentioned are overcrowding and the misuse and abuse of these areas (Alberta Recreation and Parks 1980, Alberta Recreation, Parks and Wildlife n.d., Butler 1980, Cullington 1980b, Dumoulin, Naud and Ritchie 1977). In contrast, rural areas provide a less formal and quieter setting for certain forms of outdoor recreation (Keenleyside 1971, B. Staszenski 1981: pers. comm.).

A traditional approach to providing a solution to this problem of over-use has been to create more parks. However, even this adjustment is now more difficult to put into effect. Cullington (1980b), for example, has argued that another reason for the growing attention being given to agricultural land as recreation open space is the difficulty of acquiring more parkland, particularly adjacent to urban centres. This difficulty arises out of the relative shortage of public land in these areas, the cost of land and the political implications of government land acquisition through the power of eminent domain. In comparison, "private land provides a cheap, and often free, additional supply of land that will help reduce pressure of numbers in public areas" (Cullington 1980b, p. 3). Butler (1980) has correctly pointed out, however, that even if there is no cost involved in land acquisition or access fees to private land for recreation, there is likely to be a real cost to the farmer or landowner. Experience in the United States (Kaiser and Moeller 1980) and in Britain (Thomson and Whitby 1976) shows that the extent to which privately owned land may be used by the public for recreation is dependent on the public's acceptance of reimbursing landowners for the associated costs incurred and the benefits foregone.

Clearly, the increase in demand on the agricultural land base by recreation users is likely to result in requests for higher levels of reimbursement or compensation by the landowner or, alternatively, greater restrictions imposed by the private landowner. This situation is in contrast to the relatively low level of use of agricultural land in the past. Indeed, it is the extensive nature of both informal outdoor recreation and agriculture as forms of land use that has permitted them to co-exist compatibly. This degree of harmony is becoming more

difficult to achieve and maintain when both interest groups are putting heavier demands on the land base through the increased number of recreationists, on the one hand, and the adoption of more intensive farming methods on the other (see Keenleyside 1971). The recreational use of agricultural land provides an excellent example of where "non-competitive demands (for land space) usually become competitive as the demand for the products increases in intensity; and therefore situations in which multiple use poses no allocation problem tend, with time, to become situations of conflict." (Pearse 1969a, p. 124). Evidence is provided in a subsequent part of this report to illustrate that this stage has already been reached on agricultural land, the rural-urban fringe of major urban centres in Alberta and on the public lands of the foothills region of the province. Additional evidence of the need for more careful management of supposedly multiple-use areas is afforded by the greater attention being given to integrated resource planning in Alberta, and the contentious issues that have arisen in connection with the preparation of integrated resource plans for public lands adjacent to urban centres where recreation is one of the uses involved (Alberta Energy and Natural Resources 1980, 1981d).

An additional factor which is likely to increase the involvement between the landowner and the recreationist is where the farmer purposely attempts to market the recreational potential of the farm through farm-based recreation activities and farm accommodation. In these instances recreation may provide a form of an alternative or supplementary income, although, once again, economic and human costs are incurred (Ironside 1971, Klippenstein 1973, McCracken 1972). An important factor in the possible growth in this area is the attention given to the promotion of the country vacation program and guest ranches in the tourism destination area studies prepared for Travel Alberta (see IBI Group 1979, InnTrec Group Ltd. 1981, Marshall Macklin Monaghan 1979, MTB Consultants Ltd. 1980). Butler (1980) has cautioned against regarding the agricultural land base, and specifically the private component, as a panacea to the problem of land acquisition for recreation. Both he (Butler 1980) and Cullington (1980b) raise the important issue that agricultural land should not be looked at as a substitute for conventional public recreation land but as one contribution to the recreation open space system. Agricultural land, therefore, has a complementary role to play in the open space system. Indeed, Butler (1980) has suggested that the additional recreation opportunities provided by the use of private land may generate additional demand and that at best, the use of agricultural land provides some latitude for reconsidering existing policies and developing new initiatives for accommodating future recreation demand.

ISSUES INVOLVED IN THE RECREATIONAL USE OF AGRICULTURAL LAND

The intention of this brief section is to identify some of the key issues associated with the recreational use of agricultural land. It is not intended to be comprehensive but simply to recognize that there are certain considerations and conflicts that are associated with this form of multiple use. Some of these problems have already been alluded to in the section on the impact of recreation in the resource area and in the previous section on the reasons for the use of agricultural land for recreation.

Ironside (1971) has suggested that one of the major issues involved with the recreational use of agricultural land is the conflict that arises over access and trespass and the question of

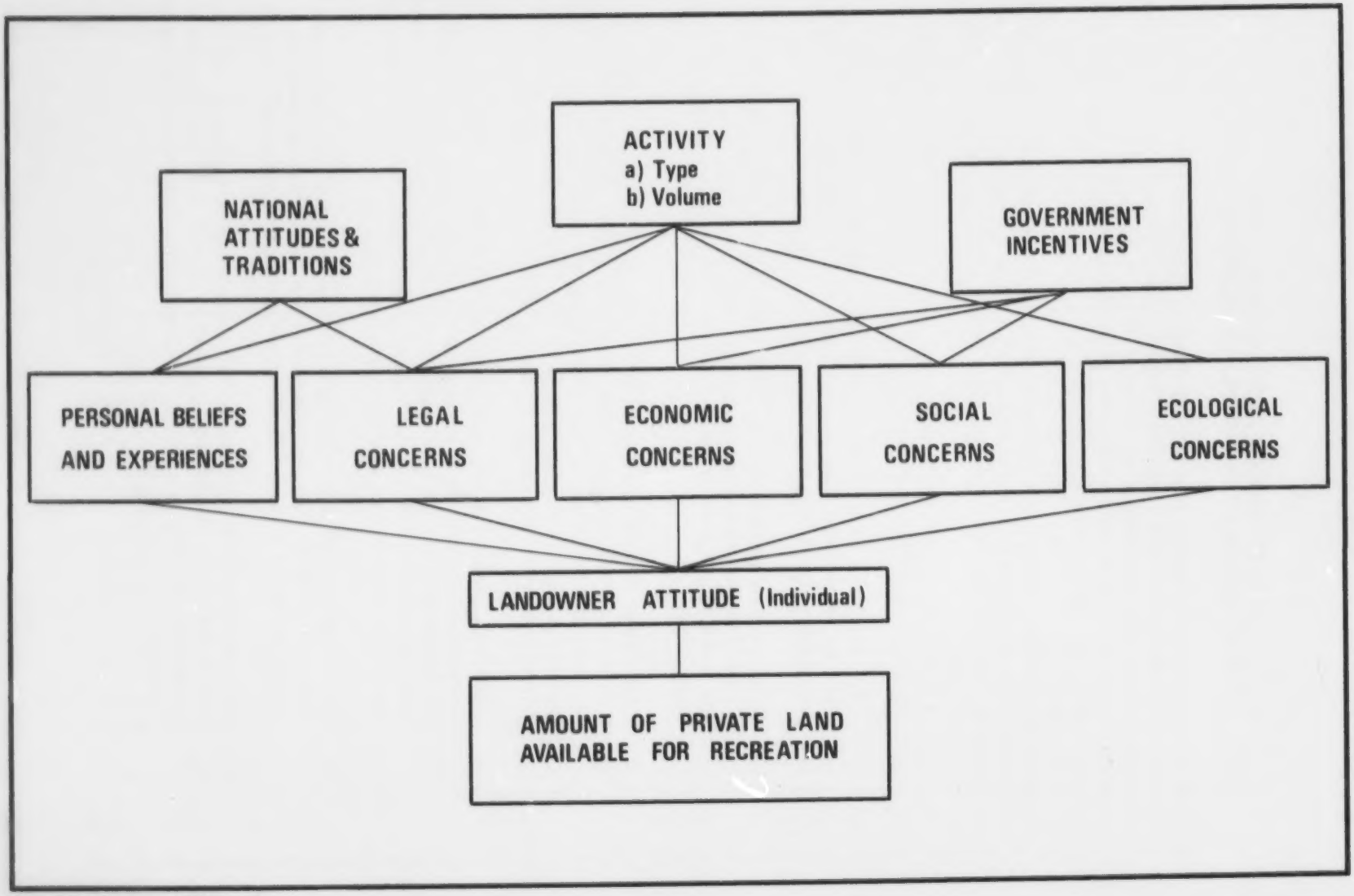
liability. Acknowledgement of the importance of this problem is widely recognized in the literature (Alberta Wilderness Association 1981a; Butler 1980; Church 1979; Conservation Council of Ontario 1975; Cordell, Legg and McLellan 1979; Cullington 1980a, 1980b; Feltus and Holecek 1979; Landals 1981; Lee 1981; Lee and Kreutzwieser 1980; Kienholz and Kovacs 1977; Lineback and Holecek 1980; Manning 1980; Ontario Ministry of the Attorney General 1980; Ontario Trails Council 1977; Pigram 1981; Van Otten and Highsmith 1977). In Alberta the confusion and conflict that arises, particularly in regard to access to public land, partly results from the complexity and multiplicity of the existing legislation relating to access and trespass (C. Brandley 1981: pers. comm., E. Kure 1981, Forbes 1981). A particular facet of the access problem is the attitudes of landowners to permitting different types of recreation activity on their land (Holecek and Westfall 1977). A possible solution to this problem of access by unwanted activities is the procedure being adopted in Ontario whereby there is a signage system for positive entry as well as a negative approach (Cullington 1980b). The problem in relation to these access issues and many other concerns associated with the recreational use of agricultural land is the difficulty of policing and control (Butler 1980).

The second major problem identified by Ironside (1971) relates to the harassment of livestock and the physical damage to farm property and crops. A major problem here, however, is the difficulty of distinguishing between damage that results from deliberate vandalism and those acts that result from ignorance and the thoughtless disregard for the farming system (see National Farmers Union, England and Wales 1979). According to Poole (1981: pers. comm.) the problem of vandalism and thievery is probably second only to that of potential liability of the landowner as an issue in the agriculture-recreation interface in the United States. Whatever the motive, however, the outcome is one where the farmer incurs certain costs.

Consequently, another major issue associated with the presence of recreationists on private agricultural land is the question of compensation for actual damages and the disruption of private enjoyment of a person's own property (Butler 1980, Hannam 1975). There is also the question of compensation in relation to the "diminuition of opportunities [to the farmer] which the actual or potential presence of visitors may entail." (Thomson and Whitby 1976, p. 308).

Ironside (1971, pp. 2-3) identifies three other areas of conflict which are worthy of mention. They are (1) increased erosion by over-use of paths, water-side areas and vegetation cover; (2) competition for agricultural hired labour by commercial recreational developments; and (3) the difficulty of buying farm land in areas affected by hobby farms and weekend farms. This latter category could be extended to include country residential or acreage development.

The attraction and use of agricultural land, and specifically that proportion in private ownership, is dependent on a number of factors. Cullington (1980a) has conveniently summarized the factors influencing the availability of private land for recreation and this information is presented in Figure 9. The implications of some of these factors have already been dealt with. Further elaboration of these and other relevant factors will be examined specifically in the context of recreation on agricultural land in Alberta.



Source: Cullington (1980a, p. 9)

Figure 9. Factors Influencing the Availability of Private Land for Recreation

RECREATION ON AGRICULTURAL LAND: CONCLUSIONS OF THE ALBERTA LAND USE FORUM

The comprehensive overview of Alberta's land-use pattern which was coordinated by the Alberta Land Use Forum (1976) provides a relevant base from which to examine many land-use planning issues occurring in the province. Not surprisingly, because of the land-extensive nature of agriculture and many forms of outdoor recreation the interrelationship of these two land uses received attention.

In particular, Pattison's (1974) study entitled *A Study of the Use of Agricultural Land for Recreation Purposes,* prepared as one of the background reports, provides a useful overview of this issue. The most important findings of that study may be summarized as follows:

1. Many Albertans use and benefit from agricultural land for non-agricultural purposes – primarily recreation.

2. The majority of such activity takes place on land owned by someone other than the recreationist. The landowners bear a large portion of the costs of this recreation and are not always compensated for their costs.

3. A variety of recreational activities take place on agricultural land. From Table 18 it is evident that fishing and small group picnics are the most popular activities for urban people, whereas snowmobiling and fishing are the most popular for rural people.

4. The average distance travelled in connection with participating in outdoor recreation activities on agricultural land varies both in terms of the different activities and the region of the province being considered (Table 19). This variation is probably due not only to the more specific resource requirements of certain activities, but also the general availability of open space.

5. Twenty-six percent of the respondents indicated difficulty finding land or space near their home for at least one of the listed activities. For the province as a whole there is a shortage of land in the settled areas for fishing, boating, overnight camping, and hunting. Regional differences in availability of land for specific activities are once again apparent (Table 20).

6. Many Albertans (39 percent) would use more agricultural land for recreation if it were available, thus clearly indicating that the demand for access to this component of the outdoor recreation/open space system does exist (Table 21).

7. The recreational use of private land presents a potential for land-use conflict, but only about one-quarter of the landowners indicated that they had experienced some difficulty or hardship from people using their land for recreation (Table 22).

TABLE 18

Thousands of household recreation days per year on Alberta agricultural land by activity and residence of recreationist*

Region of Residence	Family and small group picnics	Overnight camping	Hiking	Horseback riding	Bicycle/motorbike riding	Hunting	Fishing	Cross-country skiing or snowshoeing	Snowmobiling	Boating	Other
	Recreation Activity										
URBAN											
Medicine Hat	15.0	8.8	-	0.9	23.5	22.6	23.2	1.3	3.1	10.0	1.9
Lethbridge	6.2	19.9	9.8	1.8	-	22.8	22.1	-	21.0	10.9	0.4
Calgary	116.4	82.6	48.8	112.7	33.8	116.4	184.0	22.5	52.6	22.5	41.3
Red Deer	18.2	25.7	20.3	30.8	26.9	6.9	11.7	1.8	16.1	11.7	26.6
Edmonton	154.5	121.7	37.5	56.2	88.9	121.7	121.7	28.1	140.4	51.5	42.1
Grande Prairie	7.9	6.1	1.2	2.8	4.6	6.4	4.5	0.5	7.3	5.4	1.8
Total URBAN	318.2	264.8	117.6	205.2	177.7	296.8	367.2	54.2	240.5	112.0	114.1
RURAL											
South	30.0	18.2	6.4	23.6	20.9	40.9	34.5	0.9	22.7	5.5	5.5
South Central	41.0	36.9	17.8	51.9	28.7	42.3	53.3	2.7	80.6	15.0	19.1
East Central	16.1	12.5	5.4	44.7	28.6	34.8	28.6	2.7	64.3	17.0	23.2
West Central	44.6	14.9	15.9	35.7	68.5	26.8	38.7	9.9	80.3	23.8	30.7
North East	60.5	18.9	51.0	58.6	62.4	77.5	75.6	15.1	103.9	35.9	13.2
North West	37.3	15.8	5.7	23.7	10.8	37.3	19.4	17.2	45.9	15.8	12.2
Peace	26.4	8.5	10.9	37.3	25.6	48.9	34.2	7.8	69.9	3.1	10.1
Total RURAL	255.9	125.9	113.1	275.5	245.5	308.5	284.3	56.3	467.6	116.1	114.0
Total PROVINCE	574.1	390.5	230.7	480.7	423.2	605.3	651.5	110.5	708.1	228.1	228.1

Source: Pattison (1974, p. 12).

Note: *A household recreation day is defined as one or more members of a single household participating in recreation for part or all of one day.

TABLE 19

Average one-way distance (miles) from residence to recreation on Alberta farmland by activity and residence of recreationist

Region of Residence	Family and small group picnics	Overnight camping	Hiking	Horseback riding	Bicycle/motorbike riding	Hunting	Fishing	Cross-country skiing or snowshoeing	Snowmobiling	Boating	Other
	Recreation Activity										
URBAN											
Medicine Hat	9.2	20.0	-	4.5	0.5	22.9	19.8	-	4.6	9.4	1.3
Lethbridge	9.6	30.0	4.3	20.8	-	41.8	32.9	-	14.6	14.6	16.7
Calgary	27.0	25.2	9.6	15.8	10.2	39.4	29.1	10.1	20.3	5.9	0.6
Red Deer	17.4	12.2	13.3	8.3	25.0	46.7	12.1	90.2	9.7	10.2	0.8
Edmonton	27.8	23.7	7.7	4.4	4.8	29.9	23.9	4.9	8.5	13.5	4.4
Grande Prairie	20.7	19.3	8.0	3.6	4.0	25.0	22.9	12.0	7.9	6.7	3.3
RURAL											
South	12.5	13.5	2.5	6.9	6.9	24.2	24.3	0.5	5.7	3.2	3.7
South Central	11.6	20.1	3.9	4.4	3.5	16.0	17.7	0.6	8.1	5.4	2.2
East Central	6.9	10.0	1.1	4.5	2.2	16.9	18.5	0.3	15.4	4.8	2.2
West Central	9.5	7.1	3.3	4.0	3.6	17.3	18.4	0.5	5.5	2.8	0.7
North East	14.6	8.2	5.6	8.1	2.7	25.8	19.4	2.3	8.9	5.0	2.4
North West	28.2	32.8	23.3	13.4	20.3	35.4	28.2	15.2	25.1	18.6	6.2
Peace	12.8	8.6	2.3	6.8	5.4	16.8	7.1	5.3	13.9	3.2	0.8

Source: Pattison (1974, p. 13).

TABLE 20

Proportion of agricultural land users who are limited by available space listed by activity and region*

Region

Activity	Medicine Hat	Lethbridge	Calgary	Red Deer	Edmonton	Grande Prairie	South	South Central	East Central	West Central	North East	North West	Peace	Total Province
Family Picnics	-	17	21	6	21	13	10	9	4	11	11	7	7	15
Overnight Camping	-	42	35	29	25	47	11	9	11	16	13	18	8	22
Hiking	9	25	12	6	21	13	9	2	-	8	5	2	1	10
Horseback Riding	-	33	15	6	12	13	4	5	-	6	5	11	4	9
Bicycle Riding	-	-	9	-	13	7	3	5	1	3	7	5	4	7
Hunting	18	33	27	12	27	7	19	13	9	11	10	20	9	21
Fishing	36	17	28	5	23	13	24	24	34	25	35	9	31	37
Skiing & Snowshoeing	9	17	16	-	1	-	9	5	3	-	8	2	1	8
Snowmobiling	18	-	11	12	11	7	7	6	1	8	13	9	7	11
Boating	-	-	17	6	5	7	15	26	13	11	18	14	18	22
Other	-	-	3	-	1	-	-	2	3	2	1	-	-	2

Source: Pattison (1974, p. 15)

Notes:
*Percentage

TABLE 21

Proportion of respondents who would use the land more if more land were available

Region	Percent
Medicine Hat	56.3
Lethbridge	41.5
Calgary	55.1
Red Deer	36.2
Edmonton	49.3
Grande Prairie	55.9
South	35.7
South Central	34.6
East Central	33.3
West Central	27.0
North East	35.0
North West	30.1
Peace	34.7
Total Province	38.8

Source: Pattison (1974, p. 16)

8. Conflict is likely to increase over time as more of the recreationists will be strangers to landowners and come from the urban sector of the population. Moreover, conflict will be accentuated as land posted concentrates a growing amount of activity onto a shrinking land base (Table 22).

9. Recreationists, particularly those from the large urban centres are finding it increasingly difficult to locate accessible agricultural land for recreation.

10. The demand for land for recreation is fairly high and increasing while the supply is limited and possibly contracting. Traditionally, landowners have not charged a price for recreation on their land. Given continuation of these conditions, future use of farmland for recreation will be limited primarily by availability of land, not by price.

TABLE 22

Regional comparison between landowners who experienced inconvenience from recreationists using their land and the extent of posting against trespass

Region	Percent of Landowners Who Experienced Inconvenience	Percent of Respondents Who Post their Land Against Trespass
South	27.9	25.0
South Central	25.6	27.8
East Central	33.3	11.1
West Central	18.1	15.3
North East	18.0	19.5
North West	19.1	29.8
Peace	18.6	10.8

Source: Pattison (1974, pp. 17-18)

Note: Figure 11 illustrates the boundaries of the Agricultural Regions.

11. Landowner cooperation is essential if the land is to remain accessible. Such cooperation can be enhanced through respectful behaviour of recreationists.

On the basis of the survey, Pattison (1974, pp. 26-27) recommended a number of alternative courses of action open to the Alberta Government. They are:

1. Develop a system whereby landowners receive economic benefits from making their land available for recreation. This subject is currently under intensive study by the Fish and Wildlife Division, Alberta Lands and Forests, with regard to hunting. The results of their deliberations should be closely considered for not only hunting but also such activities as snowmobiling, fishing, and boating.

2. Encourage landowners to take the initiative in providing and advertising attractive areas for recreation. The assistance given the Alberta Farm Vacations program is an excellent example of this kind of action.

3. Purchase and develop parcels of land throughout the settled areas for specific recreational uses. Such a program would be expensive and could create some of the very conditions people are attempting to avoid by going to the farmland. Nevertheless, it may be effective for some uses such as fishing and overnight camping.

4. Strengthen law enforcement to assist in the protection of private property rights.

5. Sponsor rural-urban youth exchanges with the view to increasing goodwill and understanding.

6. Educate landowners as to the value of their property rights, privileges which are becoming increasingly unique. Flagrant abuse of these rights by the landowners themselves will inevitably result in their withdrawal.

7. Educate the general public with respect to the use of private property and the effect their actions can have on the economic well-being of farmers and ranchers. Such a program may have limited effect as the very people who would be most responsive may not be the troublemakers.

The Alberta Land Use Forum (1976, pp. 25-26) in its *Report and Recommendations* noted that on the basis of briefs presented to the Forum the availability of land for recreation was a major concern. Three significant features of this concern were the extent and location of public parks, the problems associated with recreational uses of private land and access problems. These concerns were summarized as follows:

1. The desire for open space and additional parks is particularly evident for that sector of the province's population living in the larger urban centres.

2. People want more open space within easy driving distance and this space should include bodies of water to allow for a variety of recreational uses at a single destination area.

3. There is a scarcity of lakes relative to the heavy demand, particularly in central Alberta, and access to those that do exist is too limited. Consequently, further private development on Alberta lakeshores should be severely restricted or prohibited.

4. The use of private land for recreation is a concern of user and owner alike.

5. The lack of public reserves within reasonable distances forces the user onto private land which is entered with or without permission.

6. The landowner often suffers damages from careless intruders and may be liable for injuries to individuals incurred while on private property.

The recommendations included in the briefs identified a number of approaches to improve the existing situation. These may be summarized as follows:

1. The government should establish more provincial and municipal park reserves with the continuation of a policy of nominal user fees.

2. The establishment of a public education program to foster respect for private property and the proper use of firearms.

3. The leasing of space or charging a user fee and thereby promoting the multi-use of land.

4. The exerting of common decency by users in asking permission before entering private property.

5. Where landowners permit access compensations are justified in those instances where any damage is caused.

6. Trespass laws must be strengthened to duly prosecute offenders.

The Alberta Land Use Forum (1976, pp. 234-243), on the basis of the technical reports prepared as background material for the public hearings and the content of the submissions to the hearings, noted the following aspects associated with the recreational use of agricultural land. The more important observations together with the recommendations the Forum made may be summarized as follows:

1. The demand for open space for recreation cannot all be met on crown lands.

2. The use of private land for recreation falls into two main categories: private land used exclusively for recreation and private lands used on a multi-use basis where one of the uses is recreation.

3. Due to Alberta's relatively sparse population and the seasonal climatic conditions, the opportunities for private development of outdoor recreation facilities are hazardous and limited.

4. The private landowner considering developing his property for recreation purposes must know the type and level of competition he is likely to face from the public sector.

5. The government could assist recreation development on private lands by developing pilot projects and programs designed to make the private landowner aware of the income opportunities in recreation land and to assist and encourage recreational developments on private land.

6. The question of property rights involved in access to private land and the abuse of these rights are major concerns of landowners.

7. The problem could be addressed by, first, clearly stating what the landowner's rights are regarding access and damage to his property by the public; second, by increasing penalties for trespass and abuse of private property; and third, by a concerted public education program to educate the public of the necessity to respect property rights, to identify such rights, and to be aware of the penalties for abuse.

8. A major concern associated with the recreational use of private land is in connection with hunting and fishing. The hunters and fishermen want increasing opportunities to hunt and fish, whereas the landowner is concerned about trespassing and, to a lesser extent, with the problem of wildlife being raised and being present on private land.

9. With reference to hunting, the occurrence of a public resource (wildlife) on private property raises two major issues. First, the landowner is providing a habitat and land base for the production of wildlife for which he receives no compensation and neither is he involved in the management of the public resource. Second, the hunter requires access to the land to hunt and, although the landowner is under no obligation to give his consent, neither is it legal for him to charge a fee for hunting on his land.

10. A major concern for the landowner is, therefore, trespass or entry without permission. The issue is not necessarily one of charging a fee for entry but the entry of people who do not ask permission and the damage and problems caused by such people.

11. Ultimately, the fate of the wildlife resource on private land will depend on the public's responsibility in the management of this public resource and to whom the benefits of wildlife management should accrue.

12. The attitude of the private landowner is that he should be involved in the management of the resource (wildlife) and must be permitted to share in the benefits that accrue from this resource that comes from his land. The issues are therefore those of control of access and compensation.

13. There is concern by the public over access to hunting and recreation activities on crown or public land held under lease, mainly grazing leases. The issue is focussed on the multiple use of public lands and the need to develop a policy which takes account of lessee's rights and yet provides for multiple use and public access.

14. Although the beds and shores of most lakes and streams in Alberta are public land, entry into many of these water bodies for the purposes of fishing and other water-based recreation activities is through private land.

15. If private land is used for entry into a water body, the landowner must be able to exercise control and should be compensated for the use of the land for this purpose.

16. Programs, including the use of easements, should be developed to compensate the landowner for his contribution in supplying land management for developing and maintaining areas of wildlife habitat.

17. Alternative arrangements should be investigated to permit entry onto land for recreation purposes, including the establishment of trails and walkways.

The findings and recommendations of the Alberta Land Use Forum have been summarized in a reasonable degree of detail. The rationale for this approach was mentioned at the beginning of this section. Another important reason for restating this information is that the issues addressed by the Forum continue to be, for the most part, the major concerns associated with the recreational use of agricultural land in Alberta. Moreover, in a number of instances these concerns have increased in severity rather than abated. The following sections of the report address in more detail these major issues.

CHAPTER III

RECREATION AS A COMPETITOR FOR AGRICULTURAL LAND

INTRODUCTION

The competition between alternative land uses is most clearly seen in the conversion or transfer of land-space from one land-use category to another. Not surprisingly therefore, agricultural land budget studies have paid considerable attention to the loss of farmland to alternative land uses. Although the total agricultural output of a country or province is not entirely dependent on the amount of land available for good production, "...land losses do put an additional burden on the industry." (Edwards and Wibberley 1971, p. xii). The purpose of this section of the report is, therefore, to examine recreation as a competitor for agricultural land in Alberta and to attempt to provide some assessment of the significance of this dimension of the recreation-agriculture interface for the security of the agricultural land base in the province.

DIMENSIONS OF LAND USE CONVERSION

The conversion of farmland to non-agricultural uses is a complex issue and one which has been extensively analysed in terms of the determinants of land use change, the conversion process, and the resultant land-use pattern (see for example, Bryant 1976, Gierman 1976, Russwurm 1977a, 1977b, Schmid 1970, Troughton 1976, Warren and Rump 1981). Ultimately, the dimensions of the shift in land use are both a reflection of the nature and strength of agricultural interests at a particular point in time and space, as well as the nature and characteristics of the competing land-use interests. Reference was made in the introduction of this report to the fact that agriculture is vulnerable in the land-use market because of its extensive nature and therefore its inability, or at least extreme difficulty, in competing with more intensive forms of land use, such as urban development, which will yield a greater financial return per unit area. This difficulty is compounded by the insistence on the protection of the individual rights of the property owner and the tendency for land to be regarded in many parts of Canada as a commodity rather than a resource (Russwurm 1977a).

The conversion of agricultural land to non-farming uses has a number of components. Particularly relevant are the following aspects: (1) the amount of land involved; (2) the agricultural quality of the land affected; (3) the extent to which the change in use is irreversible or not; (4) whether or not the subsequent use is rural or distinctly urban in character; and (5) externalities resulting from the change in use. These dimensions will now be briefly examined in the context of recreation as a competitor for agricultural land.

Except in those instances where recreation is site-specific, such as a leisure facility complex or summer cottage development, recreation as a form of land use is even more extensive in nature than agriculture. Consequently, recreation is not a particularly effective competitor for agricultural land, and changes in use are localized and limited in extent.

Reference has been made in this report to the fact that there tends to be an inverse relationship between land which is rated as good quality agricultural land and that which is highly suitable for most forms of outdoor recreation. Partly for this reason "parks, trails, marinas and other recreation facilities are seldom located on prime agricultural land" (Hoffman 1980, p. 10, see also Swinnerton 1974b). On the other hand, there is frequently only a low relationship between the capability of land for recreation and its development or actual use for recreation (see Gierman 1976) because of factors of location and the competitive nature of the land market, particularly in areas adjacent to major urban centres.

A third important factor in examining the long-term implications of transferring land out of food production is the flexibility afforded by the subsequent use. Coleman (1969) has advocated that an important objective of planning in rural areas should be to ensure flexibility, thus permitting the retention of options for future land-use decisions. She has interpreted flexibility as "the ease with which land can be transferred from one use to another, without constraints of cost, timing or disturbance." A spectrum of flexibility may therefore be conceptualized which extends from "*holding activities* - the most flexible form of land use; *ultimate or irreversible uses* - the least flexible form; *long term uses* - intermediate flexibility" (Coleman 1969, p. 24).

Recreation as a land use could be allocated to any one of the three categories noted depending on the specific form under consideration. However, in all probability the largest proportion of land in recreation use, such as parkland and a variety of forms of public or private open space falls within the long term use category with intermediate flexibility. Consequently, the conversion of agricultural land to many forms of recreation use is not an entirely irreversible land-use change in comparison with the ultimate or more permanent transfer of land to the built-up environment of the urban fabric.

Opposition to many transfers in land use incorporate concern for changes in the visual environment and the character and quality of the environment. As a land-use type, outdoor recreation retains many of the basic characteristics of the countryside and the change that takes place is frequently one of function rather than form. While it would be naive not to recognize that there are inevitably implications for land-use planning and management associated with any change in land use or land ownership, the impact of recreation is relatively limited in comparison with that engendered by urban growth. However, where the form of recreation is of an intensive nature such as theme parks, summer cottage development and highly developed camping sites, an alien and distinctive urban element is introduced into rural areas.

The almost imperceptible change in the character of rural areas, not infrequently associated with the increasing presence of recreation, is a more dangerous problem in the long term because it is not perceived as a planning issue until it is well entrenched in the land-use and life-style pattern of an area. When such a point is reached it is frequently too late or extremely difficult to introduce any mitigating measures. An analogy might be made here with the land actually converted to urban use and the more widespread effect and, in many ways more difficult problem, of the urban shadow effect. In addition, the loss of agricultural land to recreation may lead to externalities of both a negative and/or a positive nature.

RECREATION AS A COMPETITOR FOR AGRICULTURAL LAND IN ALBERTA

The difficulty of providing a realistic figure for the amount of land used for recreation in Alberta has already been mentioned. Available statistics (Tables 6 and 7) indicate the area formally allocated to recreation but they provide only a rough guide to the amount of land effectively used for recreation. There is even a greater paucity of statistics on the amount of land which is used for recreation in a multiple-use situation where the principal form of land use is non-recreational. Another major difficulty in arriving at a meaningful assessment of the amount of land used for recreation in the province, and the extent to which the expansion of the recreation base results in land losses in the agricultural sector, is the wide range

of land space requirements exercised by recreation. Recreation as a land use transgresses the traditional rural-urban breakdown used in land-use analysis and, consequently, some recreation uses are included within the urban figure whereas, other areas are identified as a separate entity in the rural component (see Table 6).

Land for Parks

It is apparent that in comparison with other land uses, recreation is not a major form of land use in Alberta from the standpoint of a land-use statistic. Moreover, of the less than 10 percent of the province that is allocated to recreation and/or conservation uses, 97.1 percent of this recreation/conservation area is accounted for by wilderness areas, recreation areas and Willmore Wilderness located within the Green Area and the five national parks in the province. With the exception of Elk Island National Park, all of these areas occur in areas predominantly unsuitable and spatially divorced from existing areas of agricultural activity. In addition, when reference is made to the other components of the recreation system such as provincial parks, municipal parks, highway campsites and institutional camps, it is generally assumed that they occur on non-arable or non-agricultural land (Miller 1974).

Comparison with earlier assessments of the recreational use of land in Alberta is difficult to make on a comprehensive basis because of the different categories of recreation use adopted. However, reference to selective categories does indicate the expansion of the area in recreation use. For example, Miller's (1974) compilation of recreation land uses shows that provincial parks in 1973/74 accounted for 170,000 acres (see Table 23), whereas the corresponding figure for 1979 was 302,541 acres (Table 7), an increase of 132,541 acres or 78 percent. However, most of this land was presumably in the public sector and did not involve the acquisition of private land. This observation is based on the fact that land purchases for provincial parks over the period 1970-81 totalled 15,939 acres (D. Perraton 1981: pers. comm.). In order to put this figure of 15,939 acres in perspective, it is interesting to note that during the period 1971-76, 22,051 acres of improved agricultural land were converted to urban use around Edmonton and Calgary (Warren and Rump 1981). In addition, whereas 20, 275 acres of this land absorbed by urban development were high capability agricultural land (Classes 1, 2, and 3 on the Canada Land Inventory scale) (Warren and Rump 1981), the majority of the private land acquired for provincial parks is grazing land and not prime quality arable land (A. Landals 1981: pers. comm.).

Traditionally provincial parks have been located on public lands, although private land acquisition may be required to augment the public lands in order to establish an appropriate size and shape of park unit. In those instances where private land is acquired, a fair market value is paid. However, in prime recreation areas, such as around water bodies, the public sector has difficulty in competing with private interests on the open land market (P. Skydt and D. Perraton 1981: pers. comm.).

Reference has already been made to the deficiencies in the distribution of patterns of provincial parks in the province (Figure 4 and 5) and the priority areas for future park establishment (Figure 8). Bearing in mind the relative shortage of public lands in some of these priority areas and particularly in proximity to major urban centres, the acquisition of private lands could well become more important in the future (D. Perraton 1981: pers. comm.). Under the present Provincial Parks Act, it is not permissible to enter into an

TABLE 23

Recreational land uses in Alberta (1973/74)

Kind of Use		Descriptive Outline; Relationship to Agricultural Land	Acres	Percent of Total Province
Provincial Parks	(1)	51 parks; primarily non-arable or non-agricultural land	170,000	0.104
Municipal Parks	(2)	172 parks; most parks are located adjacent to lakes, ...assume that land is largely non-arable	9,875	0.006
Provincial Campsites	(3)	337 campsites - most are highway campsites; normally on non-arable or non-agricultural land	2,470	0.002
Municipal Campsites	(4)	66 campsites, generally non-arable or non-agricultural land	2,790	0.002
Forest Service Recreation Areas	(5)	100 recreation areas located exclusively on forested lands of western and northern Alberta	39,300	0.024
Private Resorts	(6)	69 resorts primarily on non-agricultural or non-arable lands	12,710	0.008
Institutional Camps	(7)	69 camps; presumably largely on non-agricultural or non-arable land	4,820	0.008
Spectator Facilities	(8)	95 facilities - racetracks, rodeo grounds, etc.; unknown some may be located within corporate limits of cities and towns	8,000	0.005
Recreation Parks	(9)	224 facilities listed; generally town owned located within or adjacent to corporate limits of the town	4,980	0.003
Ski Hills	(10)	40 ski hill facilities; located on non-agricultural or non-arable land	5,400	0.003
Golf Courses	(11)	139 golf courses; frequently located on non-arable or urban land	10,840	0.007
TOTAL*			271,185	0.166

Source: Miller (1974, p. 6)

Notes:
Travel Alberta (1), (11); Alberta Forest Service (5);
Alberta Lands & Forests, Parks Planning Branch (2), (3), (4), (5), (6), (7), (8), (9), (10), (11).
*This total does not include Willmore Wilderness Park and three wilderness areas totalling 1.38 million acres.

agreement to incorporate private land within a provincial park, although it is possible to acquire land by purchase and to lease back some of the land for agricultural purposes until required for park development (A. Landals 1981: pers. comm.). In addition, the Alberta Government Recreation Committee (1974) has recognized the possibility of acquiring scenic and/or access easements to supplement land acquisition as a means of retaining open space. Furthermore, provision is made under the Recreation Areas Program for capital funding to apply to land acquisition through fee simple or long term lease (Alberta Recreation and Parks 1981b).

In order to provide recreation open space in areas where there is a shortage of public land or where land acquisition is unacceptable, alternative approaches to outright acquisition may have to become more widely practised. Coughlin and Plaut (1978) found no basic flaw in the theory behind the less than fee simple techniques and suggest that the reluctance of agencies to adopt such techniques is their unfamiliarity with them rather than an inherent deficiency in the techniques themselves.

Although the conversion of agricultural land to recreation use tends to occur in site specific and localized forms, two general locations may be identified where the pressures are more ubiquitous in nature. These two locations are the shorelands of lakes and other water bodies and the rural-urban fringe.

Lakes and Shorelands

One of the major concerns expressed in the public hearings of the Alberta Land Use Forum (1976) was the need for more water-based parks. Lakes and their shorelands are important recreation resources and are capable of attracting high levels of use. This characteristic is clearly demonstrated by the ratings allocated to lake shorelands in the land capability for recreation surveys of the Canada Land Inventory (see Taylor 1978). On the basis of the data assembled by the Canada Land Data Systems Division (n.d.) for Alberta, 67.3 percent of the 13,220 acres of class one recreation capability land (see Table 4) mapped by the Canada Land Inventory are shorelands capable of supporting family beach activities.

The importance of these lake and shoreland areas in providing recreation opportunities is widely recognized and so too are the associated planning problems (Alberta Environment 1977b, Alberta Municipal Affairs 1980b, Edmonton Regional Planning Commission 1978, Red Deer Regional Planning Commission 1976, Technical Committee on Lakes and Lake Shorelands 1976). Concerns relate not only to the regional distribution of lakes throughout the province and the varying patterns of demand on account of the geographical distribution of the population, but also to the land-use pressures on individual lakes and their associated shorelands.

One distinctive feature is the unequal distribution of lakes across the province and, particularly, the shortage of high quality shorelands within the 50 or even 100 mile recreation hinterlands of major urban centres (Seifried, White and Nowicki 1975). Although the Edmonton-Calgary corridor contains lakes with moderate amounts of good quality shoreland these areas are subject to the highest user pressure (Seifried, White and Nowicki 1975). In contrast, the southern part of the province shows a virtual absence of natural lakes and where they do occur, the predominance of private ownership of lake shorelands associated

with the agricultural use of these areas renders a lake inaccessible to the general public (Alberta Environment 1976). This problem of access is also experienced in relation to reservoirs in the region (T.L. Dykstra 1982: pers. comm.). In the Peace River region, good quality shoreland is virtually absent and consequently there are few opportunities to provide parks associated with suitable water bodies (R. Shillington 1981: pers. comm.). Although the Lakeland area has numerous high quality beaches, there is increasing pressure for subdivision for country residential waterfront and backshore lots (Alberta Environment 1980b), as well as the need to retain public access and space to accommodate a variety of recreation uses.

Water bodies and their shorelands, therefore, provide a particular set of circumstances where there is likely to be increasing pressures put on the agricultural landowner whose property abuts these features. Land acquisition by private developers for the purposes of developing commercial recreation resorts or lakeside cottage subdivisions is already an important issue, not only in terms of the land taken out of agriculture, but also because of the implications of the preferred linear form of development required to maximize the land/water interface. This form of development may effectively sterilize access to the shoreland and water body unless appropriate setbacks and access corridors are required during the subdivision approval stage and are subsequently enforced (see Red Deer Regional Planning Commission 1976, 1977).

The pressures from the private sector are augmented by the need to provide public recreation facilities, through the establishment of municipal parks (R. Houser 1981: pers. comm.) and provincial parks incorporating suitable bodies of water. Because the provision of lakeside public recreation facilities has not kept pace with development in the private sector in the past (Red Deer Regional Planning Commission 1977), the recommendation has been made that the provincial government and local municipalities should purchase substantial areas of shoreland to provide opportunities for public recreation as well as to provide a means of safeguarding critical wildlife and waterfowl lands around lakes (see Alberta Government Recreation Committee 1974, Red Deer Regional Planning Commission 1976).

The recreation problem is not restricted to private agricultural land adjacent to lake areas. Increasing pressure is being put on government to make dispositions of public land around lakes for cottage subdivisions (P. Skydt and D. Perraton 1981: pers. comm.). In addition, as public pressure mounts on lake shorelands for both active and passive recreation pursuits, the need for lake management plans (for example Edmonton Regional Planning Commission 1981a, Red Deer Regional Planning Commission 1977, 1979) and integrated resource plans where public land predominates (Alberta Energy and Natural Resources 1981d) has been clearly demonstrated. In addition, the increasing recreational pressures on reservoirs require that high priority should also be given to the preparation of management plans for these bodies of water. Nearly all the plans prepared illustrate the complexity of the issues and the multifarious vested interests involved, as well as the sensitivity of the agricultural faction (W.G.A. Shaw 1981: pers. comm.) to external forces and pressures.

The Rural-Urban Fringe

The other broad geographical area where agricultural land is likely to be lost to recreation is in the rural-urban fringe and, particularly, that part of the fringe which is adjacent to the

built-up area. Hoffman (1980, p. 11) suggests that the "forms of recreation facilities which are most likely to compete for agricultural land include golf courses, riding schools and private parks," all of which are features of the rural-urban fringe. Although he (Hoffman 1980) is of the opinion that any land losses to these uses are usually local and relatively insignificant, the occurrence of "amenity agriculture" pursuits has resulted in the distinctive non-productive agricultural appearance of many urban fringe areas (see Irving 1969), as well as negative externalities resulting from vandalism, trespassing, and increasing land values.

The land-use anomaly of the rural-urban fringe is that, even though the agricultural community requests protection from urban pressures and encroachment, many farmers ultimately treat land as a commodity and want the freedom to dispose of this "capital good" when it is to their individual advantage. As a result, the conversion of agricultural land to recreation uses associated with the expansion of urban centres is not always perceived as a problem by the individual landowner. How much land is transferred to urban oriented recreation uses is difficult to calculate because the land becomes part of the urban fabric. However, on the basis of the general patterns of urban growth, it would be expected that the major areas affected would be associated with Calgary and Edmonton (see Thompson 1981a) and found particularly along the transportation corridors into these metropolitan centres where recreation developments can take advantage of both local demand and the tourist (P. Taylor 1981: pers. comm.).

The Agricultural Viewpoint

On the basis of informal interviews with the six Regional Agricultural Directors in Alberta (R. Berkan 1981: pers. comm., C.S. Clark 1981: pers. comm., E. Horton 1981: pers. comm., A.D. MacKenzie 1981: pers. comm., A. Reimer 1981: pers. comm., J.B. Tackaberry 1981: pers. comm.) and representatives from a number of agricultural interest groups in the province including Unifarm (S. Bell 1981: pers. comm.), Western Stock Growers Association (A. Butterwick 1981: pers comm.), the National Farmers Union (E. Motowylo 1981: pers. comm.), and the Christian Farmers Federation (J. Kolkman 1981: pers. comm.), the conversion of agricultural land to recreation at present is not seen as a major threat to the security of the agricultural land base in Alberta. The reasons given for this opinion are as follows: (1) the actual transfer of land out of agriculture for recreation purposes is on a relatively limited scale and of a localized nature; (2) the land taken is generally of low agricultural capability and involves farmland which because of slope or poor drainage is not suited to arable agriculture; and (3) the recreational use of the land is frequently of an extensive nature such as golf courses or open space and could be reconverted to agricultural use if a land shortage for agriculture occurred in the future. Some concern, however, was expressed about fragmentation resulting from dispersed recreation development and the interpenetration of agricultural land by recreation land uses, particularly in the rural-urban fringe (see also Coleman 1969). In addition, there was a general recognition that the conversion of agricultural land to recreation uses could become an issue in the future, particularly if the pattern of land conversion involved good quality farmland.

The conversion of agricultural land to recreation use is usually considered as being insignificant when compared with the land being taken by country residential development. Although this form of urban intrusion is considered to be a "settlement" and not a recreation issue by some planners (P.M. Ojamaa 1981: pers. comm.), evidence is presented in the following

section to suggest that in many instances country residential development is inextricably connected with recreation pressures on the agricultural land base and must be treated as such if a solution to the needs of this sector of the rural population is to be found.

COUNTRY RESIDENTIAL DEVELOPMENT: A RECREATION COMPETITOR FOR AGRICULTURAL LAND

One of the major contemporary issues in Canadian land-use planning is how to reconcile the conflict between potential land users in the rural-urban fringe of Canada's major cities (Manning 1980). A controversial competitor in this land-use struggle is country residential development. The characteristics and planning problems of the rural-urban fringe have been extensively studied in Canada (for example, Bryant and Russwurm 1979, Bunce 1980, Coleman 1969, Everitt 1980, Gierman and Lenning 1980, McRae 1980, Manning and McCuaig 1977, Martin 1975, Phipps 1980, Russwurm 1973, 1977a, 1977b, Troughton 1976) and the specific problem of country residential development has received particular attention in Alberta (for example, Alberta Land Use Forum 1976, Calgary Regional Planning Commission 1978, Cox 1981a, Diemer 1974, Edmonton Regional Planning Commission 1977a, 1979, Miller and McArthur 1974, Oldman River Regional Planning Commission 1977, Parlby 1979, Peace River Regional Planning Commission 1975, Red Deer Regional Planning Commission 1975, Smith and Johnson 1978, Southeast Alberta Regional Planning Commission 1979, Thompson 1981a, Ward 1977, Whitehead 1968). Consequently, the purpose of this part of the report is not to reiterate the extensive findings of these earlier studies but to concentrate on those aspects of country residential development which relate to their recreation role and the implications of this function for the agricultural land base and other users of open space in the rural-urban fringe.

Definitions

Notwithstanding the attention allotted to the rural-urban fringe and country residential development, confusion still exists regarding the precise meaning of these two terms (see Martin 1975, McRae 1980). Clarification of this ambiguity is therefore required.

For the purpose of this study the term "rural-urban fringe" is being interpreted in a similar manner to that used by Troughton (1976) which was based in part on the work of Martin (1975). Troughton (1976, p. 4-5) provides the following definition and description:

> *The rural-urban fringe (sometimes just the urban fringe) has been variously identified as that area situated immediately beyond the city edge, and consisting of a zone of transition between continuously built-up city areas and the rural hinterland. Transition may be measured in terms of spatial, economic, social and demographic characteristics, and the zone exhibits its own characteristic set of land use, socio-economic and access attributes, the values of which fall between urban and rural norms. The dynamic aspect of the zone has been stressed in relation to the process whereby rural land is under continuous and active competition from urban uses.*

Complementary to the stance adopted by Troughton (1976), Coleman (1969) refers to the rural-urban fringe as the "rurban fringe" and notes that it is an unstable and unnecessary territory which is characterized by confrontation and conflict between "townscape" and "farmscape."

Irrespective of the specific criteria used to delimit the rural-urban fringe, it is generally accepted that it poses a number of complex planning issues. Russwurm (1973) has identified eight categories of problems associated with the urban fringe. They are: (1) haphazard, scattered, and conflicting land-use activities; (2) services and taxation; (3) governmental, planning and administrative difficulties; (4) land speculation, land fragmentation and land value; (5) environmental impact; (6) impact on agricultural land and activities; (7) social problems and dissatisfaction; and (8) impact on surrounding settlements. A number of these problems are intimately associated with the recreation-agriculture interface and will be discussed in subsequent parts of this report.

Country residential development is a component of what Walker (1976) refers to as the scattered or dispersed re-population or resettlement of the countryside outside of urban areas. According to McRae (1980, p. 7), "there are a variety of different labels to describe what are essentially three primary types of resettlement." They are: (1) permanent residences which are identified as estates and rural non-farm residences; (2) seasonal residences or second homes; and (3) hobby farms. Unfortunately, the differences between these categories are not always made clear (McRae 1980). However, country residential development is generally recognized as being included in category (1) on the basis that it is a permanent form of residence.

According to the Subdivision Regulation under the Alberta Planning Act, 1977 (Government of the Province of Alberta) country residential use means the use of land situated in a rural municipality for residential purposes or for residential purposes and in respect of which agricultural pursuits are permitted as subordinate uses. The Edmonton Regional Planning Commission (1977a, p. 4) noted that:

> *The primary purpose of Country Residence land use is for dwelling in a rural environment, and its essential land requirement is for a building site and space rather than for productive purposes.*

The Commission (1977a, p. 4-5) formerly recognized two kinds of country residences and the respective definitions are included below in order to illustrate the importance of the recreation component in this type of resettlement of the countryside.

> **Country Residence A** Subdivisions are intended for residential use. Associated recreation and educational activities may be permitted by the municipality provided that they do not conflict with the rural environment or with the quality and enjoyment of the specific local attraction.
>
> **Country Residence B** Subdivisions are intended for residential use with the option of engaging in ancilliary activities of a rural nature. Such activities are defined as agricultural, recreational, or educational activities of a distinctly non-commercial and non-industrial character.

The recreational aspect of country residential property has been cogently summarized by Moncrieff and Phillips (1972, p. 82). They state:

Acreage development appears to be a cross between urban residential and recreational cottage developments. Residences are occupied full time and possess inherent aesthetic and rural amenities at locations within easy commuting distance of the urban centre.

Prior to examining in more detail the recreation aspects of country residential development, a brief review of the land-use planning issues associated with this form of resettlement is in order.

Country Residential Development: Characteristics and Planning Issues

Subdivision of land for country residential purposes requires planning approval and because the regional planning commissions are responsible for this function over most of the settled part of the province, this level of planning authority has been particularly concerned with the country residential issue (see references at the beginning of the discussion on country residential development). The boundaries of the regional planning commissions (Figure 10) include most of the settled parts of the province (Figure 1) and, particularly, the more heavily populated areas (Figure 3), with the exception of the counties and municipal districts east of the Edmonton Metropolitan Regional Planning Commission area.

It should be noted that following the Government of Alberta's decision on the City of Edmonton's annexation application in June 1981, the Edmonton Regional Planning Commission changed its name and its planning boundaries at the beginning of January 1982. At that time it became the Edmonton Metropolitan Regional Planning Commission. Part of the western portion of the existing Commission area (the County of Lac Ste. Anne (County 28) and part of the County of Parkland (County 31)), together with the County of Barrhead, (County 11) I.D.14 and I.D. 15 and parts of I.D. 16 and I.D. 17 (see Figure 10) will comprise the new Yellowhead Regional Planning Commission (Edmonton Regional Planning Commission 1981b). A more detailed examination of the regional planning commissions and other planning authorities in Alberta has been prepared by Gordon (1981) as one of the studies being co-ordinated by the Environment Council of Alberta into the maintenance and expansion of the agricultural land base in the province (see also Alberta Municipal Affairs 1980a; Alberta Recreation, Parks and Wildlife 1979; Burton 1981).

Country residential development was recognized by the Alberta Land Use Forum (1976, pp. 83-84) as a land-use issue and a number of specific problems were identified. They may be summarized as follows: (1) the relatively large amount of land allocated to country residential development; (2) the effect of country residential development on the productive use of good agricultural land; (3) additional infrastructure and services required by the residents of country residential properties and the resultant financial burdens imposed on the municipality; (4) intensive country residential development over large areas, requiring adjustment of not only local but regional and provincial infrastructures; and (5) the development of country residential subdivisions resulting in increasing land values, which has implications for those people attempting to remain in agriculture as well as for land assembly in connection with future urban development.

These problems and related issues have been examined by the regional planning commissions in the province and policies directed towards country residential development are important aspects of their respective regional plans (see for example, Battle River Regional Planning

Figure 10. Statutory Boundaries of Regional Planning Areas

Source: Red Deer Regional Planning Commission. 1982. *Focus* 2(4).

Commission 1981, Calgary Regional Planning Commission 1981, Edmonton Regional Planning Commission 1979, Red Deer Regional Planning Commission 1981a, 1981b, Southeast Alberta Regional Planning Commission 1981).

Although it is widely recognized that country residential development can create problems for rural areas, the solution to the problem is not seen in prohibiting this form of resettlement in the countryside, but rather in more careful control during the approval stage for country residential subdivisions, particularly with regard to safeguarding the agricultural land base and the viability of farming in the rural-urban fringe. Although the Alberta Land Use Forum (1976) stated that the concern over the loss of agricultural land appeared to be excessive and advocated that the demand for country residences must be accommodated, the soundness of that observation is highly questionable, bearing in mind the many negative aspects of country residential development and the difficulties that regional planning commissions appear to have in dealing with the philosophy and administrative aspects of this form of rural settlement (see the references to the regional planning commissions above).

Thompson (1981a) has suggested that the loss of agricultural land is more complex than assumed by the Alberta Land Use Forum and points to a number of factors which support her argument. An important consideration is that country residential land use is the second largest urban-oriented land use in Alberta and, although most clearly developed around the major urban centres of Edmonton and Calgary (Thompson 1981a), has become a feature of the rural-urban fringe of many of the smaller and more remote urban settlements throughout the province (see for example Alberta Municipal Affairs 1974 and the regional plans being prepared by the regional planning commissions). A second area of concern is the quality of land being taken, since the policies of safeguarding good quality agricultural land from such development have not been adhered to as strongly as they are claimed to be (B. Butterwick 1981: pers. comm., Thompson 1981a). Another widely expressed concern noted by Thompson (1981a) is that of the negative externalities of a social, economic, and environmental nature which result from extensive country residential development (see also American Society of Planning Officials 1976). These externalities include the amount of land lying idle or underused on country residential properties (J. Edworthy 1981: pers. comm., see also Manning 1975, Swinnerton 1969), the financial burden on rural municipalities (C. Finlay 1981: pers. comm., Red Deer Regional Planning Commission 1981b, T. Sararas 1981: pers. comm.), the problems of vandalism and trespass on adjacent farmland, and the loss of wildlife habitat (Gravelines 1981). Finally, Thompson (1981a, p. 34) notes that "while the potential to restore country residential parcels to agricultural production does exist, the social, economic, and physical costs would be extremely high." (see also Red Deer Regional Planning Commission 1978b).

Country Residential Development: The Recreational Component

Cox (1981a) has reviewed the literature on country residential development in Alberta from the perspective that this form of settlement is a recreational issue. She (Cox 1981a) contends that the evidence supports Moncrieff and Phillips' (1972) hypothesis that the country residential phenomenon is to a high degree related to the demand for a lifestyle where the economic advantage of employment in the city is combined with the leisure and amenity values of the country. Of particular interest is the marked preference for country

residential parcels in areas close to the city which have high scenic and aesthetic characteristics. Moreover, the leisure activities that take place on country residential properties suggest that country residents are seeking recreational and leisure experiences on their own private "parkland."

Motivations of the Occupiers of Country Residential Properties

Although country residential living is looked at most often as purely a settlement or residential land use, the functional aspects of the lifestyle point to motivations which are similar to those found in other recreation pursuits. This phenomenon is especially apparent when examining reasons given by country residents themselves for moving to the country.

In a number of surveys and studies undertaken in Alberta on country residential owners (Calgary Regional Planning Commission 1978, Diemer 1974, Oldman Regional Planning Commission 1977, Red Deer Regional Planning Commission 1975, Ward 1977), the following factors were consistently rated as important motives for moving to the country: (1) desire for aesthetic and natural amenities of the environment: (2) desire for privacy, seclusion, peace and quiet, and open space; (3) anti-urban sentiments including dissatisfaction with urban lifestyle and environment; (4) desire to carry out quasi or minor agricultural activities; (5) perceived personal amenities of rural lifestyle, and particularly a better life for children; and (6) increased opportunities to participate in a variety of outdoor recreation opportunities. Similar motivations to these have been noted in surveys of non-farming rural residents in Ontario (Wieser 1979), British Columbia (Swinnerton 1969) and the United States (Manning 1975).

A comparison of these motives with those of outdoor recreationists shows a close similarity. For example, Iso-Ahola (1980) and Rossmen and Ulehla (1977) have identified the following motives as being important to the outdoor and wilderness recreation experience: (1) escape from urban stresses and the fulfillment of solitude and tranquility; (2) emotional rewards; (3) aesthetic rewards obtained from the enjoyment of the variety of qualities of the natural environment; (4) challenge and adventure obtained from venturous and physically demanding activities and exploration of surroundings; and (5) social affiliation rewards from interaction within one's own primary group. In both cases the motivation for involvement may be conceptualized in terms of a combination of push and pull forces (Driver and Tocher 1974) and Iso-Ahola's (1980, p. 136) contention that "leisure behaviour is the result of two opposite forces simultaneously influencing the individual: the need for stability and the need for change."

Issues and Implications

The motives lying behind the demand for country residential development give rise to a number of important land-use planning issues which have implications for both agriculture and recreation.

Land and Open Space Requirements Reference was made in the introduction to this report that one of the options for safeguarding the potential productivity of the agricultural land base in Alberta is to direct non-agricultural land uses to lower quality agricultural land. This policy is supposedly pursued in the case of country residential development and the regional

planning commissions recognize that the lower quality agricultural land may be more attractive to country residents because of its scenic undulating and wooded terrain. Indeed, the inverse relationship between agricultural capability and recreation capability has already been noted. It thus becomes a logical step to assign country residential uses to lower quality agricultural land, while at the same time recognizing the greater recreation value of these areas. Although this strategy may seem like an ideal solution which meets the needs of all concerned parties, it may cause a new realm of conflict between public informal recreation and country residential development.

Many of the regional planning commissions have recognized this potential conflict as a planning issue (see for example, Calgary Regional Planning Commission 1977a, Edmonton Regional Planning Commission 1979, Oldman River Regional Planning Commission 1974, Peace River Regional Planning Commission 1974, Red Deer Regional Planning Commission 1981a). Alberta Municipal Affairs (1974, p. 31) described the situation as follows: "one of the potential areas of conflict or competitiveness will probably be between country residential and recreational development. Very often areas having high capabilities for recreation also tend to be the most desirable sites for country residences." Furthermore, country residential development encroaches on areas that are ecologically unique such as ungulate winter range and wetlands suitable for waterfowl production (Alberta Municipal Affairs 1974).

The intended function of country residences as private recreation open space (C. Finlay 1981: pers. comm., Manning 1975, Wieser 1979) brings into conflict the vested interest of the private sector and provision for the broader public benefit and interest. For example, the Peace River Regional Planning Commission (1975, p. 10) has taken the position that, "land with high scenic value should be available to the public and not just those who can afford to buy a parcel of it for a country home. The policy proposed ...is intended to direct rural subdivisions away from the best scenic and agricultural land." Comparable policies will have to be more widely adopted and effectively implemented particularly in the rural-urban fringe areas of the major urban centres throughout the province if private farmland is to be protected from greater recreation pressure in the future. The significance of the problem results from the fact that country residential development influences the availability of land for recreation in a number of ways.

Country Residential Development and Public Access to Rural Land The creation of country residential subdivisions removes land space from effective recreation use irrespective of whether the area had been previously wooded or actively farmed. The issue is not simply one of changes in the physical setting resulting from the creation of smaller property units, residential development, and the modification of the bio-physical and visual landscape, but is also the attitude of these new rural residents towards allowing public access to their land.

Considerable evidence exists to suggest that because many owners of country residences have acquired their property for the specific purpose of ensuring privacy and seclusion and the opportunity to participate in outdoor recreation on their own terms, they are extremely reluctant to share this land space with other people (see Manning 1975, Ward 1977, Wieser 1979, Wilkins and Brown 1973). Wieser (1979), for example, noted in her study of non-farming rural landowners in part of the Toronto rural-urban fringe in southern Ontario that 84 percent of the landowners did not allow public access to their properties

and, of the 16 percent that did, only a limited range of recreational activities were accepted. The permissible activities were nature walks, cross-country skiing, wildlife appreciation, hiking or leisure walking and in some cases, horseback riding. This predisposition to permitting the relatively *more passive and* non-consumptive forms of outdoor recreation rather than consumptive (hunting) or vehicular (snowmobile, four-wheel drive, trail bike) activities has been noted elsewhere (Brown 1974, Holecek and Westfall 1977).

Another facet of country residential development relevant to the availability of open space for recreation is in relation to the possibility of non-purchase land acquisition programs for public recreation open space. Reference has already been made in this study to the interest shown in Alberta to this approach for the procurement of open space, particularly that adjacent to urban areas. Unfortunately, land under country residential development makes the pursuance of this policy more difficult than if the land were in agriculture. One factor is that country residential units are small both in absolute and relative terms when compared with most actively farmed agricultural holdings. Consequently, the negotiation of access and management agreements with a multitude of landowners, whose property is frequently less than five acres in size, is a much more difficult and time consuming undertaking than if the land is part of large farm units. Moreover, "the resulting patchwork of small individually owned parcels open to public recreational use would create administrative problems for agencies, and conflicts and confusion for both recreationists and private landowners." (Holecek and Westfall 1977, p. 10). A further complication is that many rural landowners, and particularly non-farm rural residents, are extremely reluctant to allow public access to their land even if government assistance, including monetary payments, is involved. The reasons given for this negative attitude include concern over loss of privacy, damage to property, control of the public recreationist and liability (Holecek and Westfall 1977, Wieser 1979).

Unfortunately, there is a paucity of documentary evidence on these specific effects resulting from country residential development in Alberta. However, on the basis of the informal interviews with owners of country residential property (C. Finlay 1981: pers. comm.) and a variety of recreation groups such as the Alberta Canoe Association (C. Lee 1981: pers. comm.), the Alberta Snowmobile Association (D. Blakeman 1981: pers. comm., B. Clark 1981: pers. comm.), trail bikers (R. Zacsko 1981: pers. comm.), as well as representatives from the agricultural sector (A. Reimer 1981: pers. comm.), there is some basis for suggesting that the protectionist attitude of country residential property owners does severely restrict the recreational accessibility of this land. The implication of country residential development in the rural-urban fringe is, therefore, that the public has to find alternative settings for recreation which frequently means private farmland. Although public reserve land as part of country residential subdivisions provides the possibility for accommodating some of this recreation demand, the full potential of these areas is generally not recognized (C. Finlay 1981: pers. comm., Rudge 1977).

In addition to the increasing recreation pressure resulting from the urban dweller coming into the rural-urban fringe, there is the recreation demand generated by the country residential residents themselves. It has already been noted that one of the most important motives given for living on country residential property is the increased opportunities to undertake outdoor recreational pursuits (Oldman River Regional Planning Commission 1977, Red Deer Regional Planning Commission 1975). A number of the preferred activities such as horseback

riding, walking, hiking, cross-country skiing and snowmobiling require more land space and in a different configuration from that which is provided by most country residential properties. Consequently, there is almost inevitably a spill-over effect onto adjacent land which may be public reserve land or private farm land. According to the *Country Residential Survey* undertaken by the Calgary Regional Planning Commission (1978, p. 32) "almost 45 percent of the residents used public reserve lands for horseback riding, walking and hiking, picnicking or leased for pasture." On the other hand, Diemer (1974), in his study of country residents in the County of Parkland, noted that only a small proportion of these owners used public reserve lands for recreation. There is little likelihood that public reserve lands accommodate all the demand for recreation open space and, consequently, some use of adjacent farmland is likely to occur (C. Finlay 1981: pers. comm.).

This potential conflict between the country residential resident and nearby farmers is not restricted to recreation issues but is only part of the more general confrontation between the new rural resident, with predominantly urban attitudes, and the traditional values of the farming community (see Red Deer Regional Planning Commission 1978b).

Country Residential Development and Parks Another facet of country residential development which illustrates the dilemma of accommodating both the private and public interest in land-use allocation decisions is the competition for land between country residential development and park establishment by provincial and/or municipal levels of government. This problem is particularly well illustrated by circumstances in the Edmonton region although the issue is not restricted to this specific part of Alberta.

The Edmonton Regional Planning Commission (1979) has noted that the scenic moraine uplands within the region are currently being intensively developed for country residential use (for example, the Glory Hill-Duffield Moraine and Cooking Lake Moraine areas). Although these and similar areas are not ranked as being of high recreation capability under the Canada Land Inventory classification system (most of these areas have been assigned moderately low, Class 5 ratings with limited amounts of moderate, Class 4 land (see Table 4), with opportunities for viewing upland and wetland wildlife and general outdoor recreation including hiking, nature study and aesthetic appreciation (see Land Capability for Recreation, Sheet 83H Edmonton)), these areas are extremely important recreation resources in terms of their proximity for the metropolitan population of Edmonton as well as their inherent value for accommodating extensive forms of outdoor recreation. Because of the omission of these characteristics in the Canada Land Inventory system, the recreation significance of these and comparable areas tends to be underrated. In addition, there is every likelihood that the recreation value of these areas because of their "situation utility" (see Ward 1977) will grow with the increasing cost of travel and the ensuing importance of having recreation open space adjacent to major urban centres. Therefore, the loss of this type of resource to country residential development is an issue of real concern.

Certain portions of these moraine uplands have been considered by the Provincial Parks Division for designation as provincial parks. For a variety of reasons the government did not obtain the land and country residential development has taken over what was considered a superb recreational area (D. Perraton 1981: pers. comm.). An indication of the problems is provided by the Edmonton Regional Planning Commission (1979, p. 3-72):

Owners of good recreational land are often reluctant to conserve the land for eventual public ownership and use since higher economic returns can be gained from other uses. For this and other reasons, recent attempts to implement public park systems in the Glory Hills and Cooking Lake Moraine areas have met with local opposition.

Provincial park officials often recognize that they are competing with country residential development, and strategies often amount to the assembling of land prior to country residential demand becoming an economic presence (D. Perraton 1981: pers. comm.). Alberta Environment, the agency responsible for purchasing land for the Provincial Parks Division, prefers to pay for land on the basis of its current use (agriculture) rather than its potential use (country residential) (C. Primus 1981: pers. comm., T.L. Dykstra 1981: pers. comm.) and, as a result, government is at a distinctly low bargaining position for acquiring good quality recreational land when its recreation potential has been recognized by the private sector.

Municipal authorities face similar problems because of the difficulty of paying equitable prices for land that may be inflated because of its recreational value for private development. In addition, there is the problem that if land is designated in a land-use bylaw for public recreation or park purposes, the municipal corporation must, within six months acquire, or commence proceedings to acquire that land or amend the bylaw to another use (T. Sararas 1981: pers. comm.). Consequently, if the establishment of public parks is made prohibitively difficult, particularly in critical areas of recreation demand, the farming community is likely to suffer the effect of increasing amounts of informal outdoor recreation taking place on private agricultural land.

New Strategies Required

Most of the regional planning commissions are aware of many of the land-use planning problems resulting from country residential development and some of them have advocated decreased lot sizes, increased density of parcels per quarter section or clustering of country residential parcels in order to maximize the area of open space or unrestricted use (see, for example, Battle River Regional Planning Commission 1980, 1981, Calgary Regional Planning Commission 1980, Red Deer Regional Planning Commission 1981a). However, the recreation motives behind the ownership of country residential property and the long term implications for the availability of space for public recreation, and ultimately agriculture, have only received limited attention.

There is obviously no single solution to the country residential issue but there are a number of observations that need to be made. They are:

1. It is evident from the content and policies included in many of the proposed regional plans that the respective planning staff are attempting to find equitable planning solutions to the country residential issue. However, these policies have to be acceptable to the representatives of the constituent local authorities which comprise the political component of the regional planning commissions. Reference has already been made in this study to the fact that many rural municipalities do not regard the provision of recreation open space or the control of country residential development as major land-use issues. On the contrary, country residential development is frequently supported on the basis of its supposed net contribution to tax revenue (T. Sararas 1981: pers. comm.).

Furthermore, many residential development proposals that have been refused by regional planning commissions, in their capacity as the subdivision approval authorities, have been subsequently appealed to the Alberta Planning Board where the decisions have been reversed. The issue, therefore, is not so much a deficiency in technical planning, but rather one of administrative expediency and political acceptability of the policies being developed by the planners.

2. If the growth of country residential development needs to be more strictly controlled and/or restricted in certain areas, greater consideration needs to be given to the combined effect of planning legislation and property assessment as a mechanism for control. Although recent changes in property assessment have put an increased financial burden on country residential residents who do not use their land for agriculture (see Alberta Municipal Affairs 1980c, *Alberta Report* 1981, A. Fenton 1981: pers. comm.), it is unlikely that this change will be sufficient to significantly influence the demand for country residential property since this was not the purpose behind the revision (A. Fenton 1981: pers. comm., A. Reimer 1981: pers. comm.).

3. Despite the conflicting evidence regarding the level of use of public reserve land for outdoor recreation by the residents of country residential property (see Calgary Regional Planning Commission 1978, Diemer 1974), there is a clear indication that a more positive approach is required in the planning and management of reserve land. In addition, rural municipalities need to be made more aware of the long term benefits of safeguarding appropriate areas for public open space. This function of reserve land should be complementary to the establishment of provincial and municipal parks. Moreover, in areas where country residential development has prevented provincial or municipal park designation, the recreational open space function of public reserve land needs to be even more carefully scrutinized and protected.

Conclusion

The conversion of agricultural land to recreational use is not regarded as a major land-use issue in Alberta. In most instances where conversion takes place the area affected is localized and the land is generally of low agricultural quality. However, land-use pressures on shorelands and in the rural-urban fringe are more common and are becoming increasingly significant planning issues. The growing demand for country residential development in preferred recreation areas has been interpreted as a conflict between private and public interests within the recreation sector, although there are clearly subsequent implications for agriculture, both in terms of land requirements and the use of farmland for informal recreation.

Outdoor recreation as a predominantly extensive form of land use is not a particularly effective competitor for land space, even when agriculture is the alternative land use involved. The problem for both these land-use interests is that they are at a disadvantage when competing with more intensive forms of land use such as urban development and transportation development (see Calgary Regional Planning Commission 1977a). For the most part, therefore, recreation and agriculture occur in a multiple use relationship which is the subject of the next chapter of this report.

CHAPTER IV

RECREATION ON AGRICULTURAL LAND: A MULTIPLE LAND USE ISSUE

INTRODUCTION

Evidence, based largely on the work of Pattison (1974), was presented in Chapter II to illustrate that a variety of recreation activities take place on agricultural land in Alberta. Unfortunately, there has been no comparable study undertaken since that time to provide an overview of the current situation. In the absence of such a study, this chapter examines the recreational use of agricultural land in terms of a selected number of recreation activities and the issues associated with their use of agricultural land. However, many of the problems and issues identified are intimately associated with the application of a multiple-use concept and a brief explanation of this concept is in order.

THE MULTIPLE USE CONCEPT

Multiple use is often extolled as a panacea to land-use planning problems, particularly in those circumstances where there are a variety of demands for limited resources (Pearse 1969b). Despite the wide acceptance of the concept of multiple use, its explanation is frequently expressed in extremely vague terms and its application has been less than satisfactory. For example, Nowicki (1972, p. 4) in reviewing the use of forested lands in Alberta, noted that "...we have committed large tracts of land in Alberta to essentially single uses in the guise of multiple use." Although the resource management policy for the Eastern Slopes (Alberta Energy and Natural Resources 1977) addressed the issue of multiple use, confusion still exists over the real meaning of the concept and its effectiveness in practice (Environment Council of Alberta 1979).

In an attempt to clarify the situation, particularly with regards to the recreation use of the countryside, Wibberley (1966, p. 8) has suggested that the broad concept of multiple use should be considered in terms of three definitions (see also Green 1977). They are:

> *"Multiple" use is when a piece of land is used for more than one distinct use at one and the same time;*
>
> *"Linked" use is when there are single uses of specific pieces of land but they have reactions on each other;*
>
> *"Phased" use is when specific single uses follow each other through time.*

An observation made by Wibberley (1966, p. 8), in connection with the problem of recreation as a multiple-use form in Britain, and which is beginning to show signs of application to Alberta, is that "multiple uses ...introduce strains on land uses, on productivity and on personal loyalties and desires which are difficult to remove." Certainly, the problems involved in applying a multiple-use policy are becoming increasingly recognized because of institutional difficulties, the inflexibility of government agencies, data problems and particularly the difficulty of measuring economic and social values in order to maximize total benefits (see Clawson, Held and Stoddard 1960, Moncrieff 1972, Pearse 1969a, 1969b, Toma 1979). Reference was made earlier in this study to the fact that probably the overriding problem with the application of the multiple-use concept is that compatible uses tend to become situations of conflict with increasing intensity of demand over time (Pearse 1969a). This problem is compounded by the fact that most individuals and agencies conceive of multiple use as consisting of a priority use (preferably their own interest) with subsidiary uses if they are compatible (Environment Council of Alberta 1979).

Recreation as a Multiple Form of Land Use

The extensive nature and non-consumptive characteristics of many outdoor recreation activities have given rise to the widespread occurrence of recreation as one component in a multiple land-use relationship. Three other factors have contributed to this situation. First, there is the important factor that, except in certain critical areas, the pressure of the recreationist has not been of sufficient magnitude to create an unacceptable impact (environmental, social or economic) on the other land-use interests involved in a joint-use relationship. Second, recreation frequently benefits from a multiple-use arrangement because of the contribution that the other land uses make, through positive externalities, to recreation. Examples of these externalities include interesting cultural landscape patterns resulting from agriculture, the provision of access roads and trails as an outcome of timber harvesting, and the opportunities afforded by reservoirs for a variety of water-based recreation activities. Finally, there is the fact that outdoor recreation is not a particularly effective competitor in economic terms for extensive areas of land space and consequently, in a competitive land-use situation, it is difficult for recreation to achieve single-use status. As a result, recreation has frequently little option but to take place as a secondary form of land use in a so-called multiple-use situation.

Despite the apparent compatibility between recreation and other forms of land use, including agriculture, the necessary compromise to ensure this relationship is becoming increasingly difficult to establish and maintain. Agriculture is becoming more intensive in its use of land and this trend imposes important limitations for the use of farmland by the recreationist, as well as affecting the quality of fish and wildlife habitats (see Glasgow 1982). At the same time, increasing levels of participation in a variety of recreation activities (see Chapter 1) mean that conflicts will undoubtedly increase in the future (Outdoor Recreation Sector Group 1975). There are two other factors that are undermining the harmony between recreation and agriculture. First, there is the growing recognition that even so-called non-consumptive forms of recreation have a significant impact on the environment (see Wilkes 1977), particularly if large numbers of people are involved. Second, there is an increasing feeling that too much significance has been given to achieving compromise in multiple land-use planning and management decisions prior to undertaking a realistic and thorough examination of which land uses are genuinely compatible (Green 1977).

With reference to Britain, Green (1977, p. 69) has suggested that "the conflict between modern agriculture and amenity is real. Much has been done to try to disguise this clash of interests and suggest that compromise is possible." Although the pressure of land-use competition is more intense in Britain than in most parts of Canada, it is interesting to note that Manning (1980) in his review of land-use issues in Canada pointed to incompatibility between recreation and agriculture in the form of hunter access, general access across farmland and trespass, particularly in the urban fringe. In Alberta there are few incentives for the private landowner to encourage or even tolerate public recreation on his land (Landals 1981) and since most forms of public recreation take place on private property by default rather than by design (see Lundgren 1980), the need for strategies to deal with this growing recreation pressure is of fundamental importance. These issues and problems will now be examined with specific reference to Alberta.

NATURE AND EXTENT OF THE USE OF AGRICULTURAL LAND FOR RECREATION

The Recreational Attraction of Farmland

On the basis of the data assembled by Pattison (1974), included in Chapter II of this report (see Tables 18, 19, 20 and 21), it is evident that a variety of informal outdoor recreation activities take place on agricultural land. Although there are some regional variations in the amount of participation and levels of accessibility to destination areas for different activities, the use of agricultural land throughout the province for recreation is clearly demonstrated.

One of the reasons for the widespread use of agricultural land for recreation is that many of the activities that use such land for recreation open space are not particularly discriminating or demanding in the type of setting they basically require. However, there is obviously a range of environmental settings for each activity or experience which extends from highly desirable to inadequate (see Clark and Stankey 1979, More and Buhyoff 1979).

It is generally accepted that the characteristics of the rural environment which give it attraction for informal outdoor recreation are variety and the occurrence of natural features in the landscape. In relation to the latter characteristic, the attribute of the agricultural landscape which largely determines the recreation capability of farmland is the extent and quality of the natural environment occurring within an otherwise modified environment for agricultural production (see Calgary Regional Planning Commission 1977b). Consequently, the recreational value of farmland for a variety of recreational activities including sightseeing, walking, country residential development (see Chapter IV), wildlife observation and natural history study (D. Ealey 1981: pers. comm., R. McElhaney 1981: pers. comm., Glasgow 1981) is strongly influenced by the existence of "nodes" made up of lakes, wetlands, woodland, and bush among improved farmland, or the linear occurrence of these features associated with river valleys, streams or coulees.

The importance of river valleys as wildlife habitats and for recreation has been widely recognized by the various regional planning commissions (see for example, Battle River Regional Planning Commission 1978, Calgary Regional Planning Commission 1977b, Edmonton Regional Planning Commission 1979, Kienholtz and Kovacs 1977, Red Deer Regional Planning Commission 1978a, 1978c). At the same time, the attraction of these areas for recreation creates problems, including environmental damage from overuse and, particularly, from off-road vehicles, conflict between different recreation user groups, and conflict with the landowner over trespass and damages. Not only may the landowner whose property is adjacent to the river suffer crop damage and livestock harassment but, "the serenity of his rural environment may be disrupted, and his personal safety may be endangered." (Red Deer Regional Planning Commission 1978c, p. 148).

An important factor in considering the recreational use of agricultural land, particularly in relation to developing strategies for dealing with public access, is that in many instances people are crossing farmland in order to reach the non-agriculturally productive areas of the rural landscape. This factor is equally true whether access is being sought across private land in the rural-urban fringe or where access is required across grazing land adjacent to the forested areas in the Green Area (J.R. Robinson 1981: pers. comm.). The negotiation of

rights of way through easements or management agreements has already been referred to in this report and the potential for their application is made evident by the forementioned pattern of recreation behaviour (see Whyte 1970).

Areas of Recreation Concentration

Two other broad spatial patterns of recreation behaviour are evident. On the basis of the informal interviews with recreationists and agricultural interest groups the premise may be made that recreation on agricultural land tends to concentrate in two broad areas or zones. These areas in both instances are fringes between agriculture and alternative forms of land use.

The Rural-Urban Fringe

This part of the rural landscape is used extensively for recreation because of its convenient location relative to the centres of urban population. As a result, recreation pressures on agricultural land are evident around major urban centres throughout the province. Because of the proximity of agricultural land in the rural-urban fringe, the recreational use of this area is associated with day trips or even shorter periods of leisure time. The recreational significance of agricultural land in the rural-urban fringe is due to its situation utility rather than its site utility. However, even in the rural-urban fringe the predominantly natural areas with varied terrain and vegetation cover are preferred recreation destination areas. Consequently, in those areas where situation utility and site utility are combined, such as in the Cooking Lake Moraine area near Edmonton and the Bow River Valley near Calgary, a concentration of recreational use with subsequent pressures on the resource base result. The Blackfoot Grazing Reserve is a specific example which, because of its proximity to Edmonton and its location within the Cooking Lake Moraine area, together with its public land status, has given rise to a variety of land-use conflicts. The *Integrated Resource Plan: Blackfoot Grazing Reserve* (Alberta Energy and Natural Resources 1980) is an attempt to reconcile these conflicting uses (T. Hafso 1981: pers. comm.).

The recreational use of agricultural land in the rural-urban fringe provides an example of the user-oriented or intermediate category of outdoor recreation resources (see Clawson and Knetsch 1971 and Table 3). Not surprisingly, because of the situation utility of the rural-urban fringe, there is a substantial consensus of opinion that if problems do arise over the recreational use of agricultural land, they are likely to occur in this fringe area (M.C. Taylor 1981: pers. comm.). This opinion is widely held, both by those persons with a direct or indirect interest in agriculture (S. Bell 1981: pers. comm., C. Brandley 1981: pers. comm., B. Butterwick 1981: pers. comm., J. Edworthy 1981: pers. comm., H. Entrup 1981: pers comm., J. Kolkman 1981: pers. comm., E. Motowylo 1981: pers. comm., A. Reimer 1981: pers. comm., J. Tackaberry 1981: pers. comm.), as well as by a variety of recreation interest groups (D. Blakeman 1981: pers. comm., D. Ealey 1981: pers. comm., C. Lee 1981: pers. comm., L. Wall 1981: pers. comm.).

The Marginal Fringe

The second broad area where recreational pressure on the agricultural land base is particularly evident is in the fringe zone between agriculture and the forested and more natural

environment of the Green Area in the Province. More specifically, the area most affected is the agricultural margins of the Eastern Slopes and foothills of the Rocky Mountains. Coleman (1969) has referred to this area located between "farmscape" and "wildscape" as the "marginal fringe."

The recreation attraction of the marginal fringe in Alberta is due in large part to its site utility associated with the quality and variety of the natural landscape and the feeling of spaciousness and wilderness. This zone provides opportunities for a wide variety of outdoor recreational activities (Environment Council of Alberta 1979, Sadler 1978). For the most part, the marginal fringe is predominantly used for recreation at weekends and vacation periods because of its greater distance from major centres of population. This observation is probably particularly true of the marginal fringe north of the David Thompson Highway. However, even in this part of the province, this fringe provides important day-use recreation opportunities for the residents of urban centres such as Rocky Mountain House, Edson, Hinton, Drayton Valley, and Whitecourt. Further north the interface between the agricultural land and the forested areas provides comparable opportunities for the residents of Grande Prairie and Peace River. The population centres in the north-east such as Lac La Biche, Bonnyville, and Cold Lake can also make day-use of the boundary zone between the Green and White Areas (see Sadler 1978).

The marginal fringe receives heavier recreation pressure in the country extending southwards from Rocky Mountain House to as far as the American border. There are a number of reasons for this level of use. First, there is the greater proximity of centres of population, specifically Calgary, but also Red Deer and Lethbridge and even smaller urban settlements, which create the demand for outdoor recreation. Consequently, considerable areas of the foothills and adjacent range lands which comprise the marginal fringe in this part of Alberta are within the day recreation hinterland of urban centres such as Calgary and Lethbridge (see Figure 3). A second factor is that the recreation attraction of the marginal fringe in the south-west of the province is enhanced by the proximity of the Rocky Mountains and their national parks which provide both an attractive and stimulating visual backdrop as well as a perceived recreation image to the area. An additional factor is that, in contrast to the agriculture-forest edge in the northern part of the province, the varied topography, with a greater preponderance of range land, and broader river valleys penetrating the heavily forested foothills (Green and Laycock 1967), makes the southern margins more acceptable as recreation environments. The Porcupine Hills afford a good example of the type of environment which provides opportunities for extensive forms of outdoor recreation (D. Pachal 1981: pers. comm.). In addition, the existing road network for the motor vehicle (Oldman Regional Planning Commission 1979) and the fact that the range lands in the foothills east of the Forest Reserve are public lands under grazing dispositions has, in the past at least, ensured relatively easy public access to much of this area (Alberta Wilderness Association 1981a). Consequently, "the mountains and foothills of south-western Alberta have historically been the playground for recreationists." (Oldman Regional Planning Commission 1979, p. 7).

All three regional planning commissions (Red Deer Regional Planning Commission 1978a, Calgary Regional Planning Commission 1977b, Oldman Regional Planning Commission 1979) (see Figure 10) whose jurisdiction extends into the foothills, have commented on the recreation importance of the western end of their respective regions (see also IBI Group

1979, InnTrec Group Ltd. 1981). Because of the bias of the recreation capability classification of the Canada Land Inventory towards intensive forms of outdoor recreation, the rolling and hilly portions of the lower foothills are only Class 4 lands with moderate capability for outdoor recreation (see Table 4). Nevertheless, such areas are important for a wide range of extensive or dispersed types of recreation, including hiking, fishing, back-country camping, hunting, canoeing, off-road vehicles and four wheel drive, as well as winter activities including snowmobiling and cross-country skiing (Calgary Regional Planning Commission 1977b, Red Deer Regional Planning Commission 1978a, M.C. Taylor 1981: pers. comm.). "The greatest recreation potential in the foothills is found in and alongside its rivers and streams and valleys." (Calgary Regional Planning Commission 1977b, p. 7). Largely because of these heavier levels of use found in these corridors, conflict is arising between both different water-based activities, such as canoeing and rafting, (C. Lee 1981: pers. comm.) and land-based recreation activities, including off-road vehicles and hikers (B. Staszenski 1981: pers. comm.). In addition, there is growing confrontation between recreationists and ranchers (see Kienholz and Kovacs 1977, Red Deer Regional Planning Commission 1978c, M.C. Taylor 1981: pers. comm.).

Most of the land in this south-western part of the marginal fringe of Alberta is Class 5 and 6 on the basis of the soil capability for agriculture classification of the Canada Land Inventory (Environment Canada map 1976). Consequently, agricultural use, on the basis of the classification, is restricted to grassland or, at best, to the production of perennial forage crops. According to the *Critical Capability Areas* map for Alberta (Environment Canada 1975b) based on Canada Land Inventory data, critical capability areas in most of these marginal areas are restricted to ungulates and/or recreation. Nevertheless, considerable areas of rangeland are considered to be prime agricultural land from a ranching perspective (D. Laycraft 1981: pers. comm.). Consequently, the question of what is the most appropriate use of the land resource base is complicated by the interpretation of the term "prime" land, which does not necessarily correspond to the ratings assigned to land on the basis of physical capability, which was the procedure adopted by the Canada Land Inventory (see Raup 1976).

On the basis of the evidence there appears to be increasing competition for land in the marginal fringe from recreation, wildlife production (wild ungulates) and cattle (domestic ungulates) (A. Birch 1981: pers. comm., B. Butterwick 1981: pers. comm.). Whether or not the recreation pressures on agricultural land in the marginal fringe are more of a problem than those pressures resulting from the recreational use of agricultural land in the rural-urban fringe, is difficult to assess. Colgan (1981: pers. comm.) feels, however, that the recreational use of agricultural land is more of a problem for the farmers and ranchers in the foothills than their counterparts in the rural-urban fringe. One of the reasons for this opinion is that the foothills offer wider expanses of open farmland which are difficult to control and police. There is little doubt that at the present time the issue of public access to public land under grazing, much of which occurs in the foothills and their eastern borders, has focussed considerably more attention on the margins of the "wildscape" as opposed to the fringe of the "townscape."

Regional Variations in the Significance of the Recreational Use of Agricultural Land

Before referring to some of the specific issues associated with the recreational use of agricultural land in Alberta, an overview of the situation compiled on a regional basis is presented.

Two basic information sources were used in an attempt to provide this regional assessment. One source was the regional plans and associated material prepared by the eight regional planning commissions whose jurisdictions cover most of the agricultural land within the province (see Figures 1 and 10). The second source of information was informal interviews with the six Regional Agricultural Directors in the province. Although the regional boundaries used by the regional planning commissions and those adopted by Alberta Agriculture do not coincide, there is the basis for providing a regional perspective (see Figures 10 and 11).

Peace River Agricultural Region

The area covered by the Peace River Regional Planning Commission includes the Yellow Area in the northwestern part of the province. According to a study undertaken by the Peace River Regional Planning Commission in 1974 and entitled *Outdoor Recreation and Tourism in the Peace River Region of Alberta,* the greatest potential for outdoor recreation within the region is associated with the river valleys and forested areas as opposed to the agricultural area. The question of outdoor recreation on agricultural land has not been raised as a significant issue in the context of regional planning. It is also not foreseen as a planning and land management problem. At the present time other agricultural issues overshadow any existing conflicts with recreation (S. Fagyas 1981: pers. comm.).

Fagyas (1981: pers. comm.) has speculated that the main reason why the recreational use of agricultural land is not a problem is the relatively low population concentrations within the region as compared to other parts of the province (see Figure 3). Consequently, the demand for recreational opportunities is of moderate proportions. Other important factors which help to explain why the recreational use of agricultural land is not a problem include the fact that urban centres are small and still have an important function as agricultural service centres. There still remains a strong attachment to the rural land base and an awareness of farm practices. The only trend that might agitate a recreation-agricultural land conflict is the country residential movement around the urban centres of Grand Prairie and Peace River (S. Fagyas 1981: pers. comm.).

The assessment of the nature and significance of the recreational use of agricultural land in the Peace River region provided by Fagyas largely coincides with an agricultural appraisal of the situation. According to E. Horton (1981: pers. comm.) the conflict between recreationists and agricultural interests is minimal in comparison with other parts of the province. Factors responsible for this predominantly amicable relationship include the following: (1) no major centres of population; (2) the predominantly agricultural character of the region, including the urban settlements that serve as rural service centres and (3) the access that a large proportion of the region's population has to their own land for recreation purposes.

Any conflict is likely to occur during the hunting season but this is not a particularly significant problem at the present time. Most of the hunting takes place in the Green Area (see Figure 1), although there is the problem of some indiscriminate hunting on grazing reserve land. Posting of land against hunting and trespassing is not widespread although there is a higher concentration of prohibited access on land taken for country residential development, such as in the Fairview area. From an agricultural perspective, then, the question of conflict between recreation and agriculture in the Peace River Region is a non-issue (E. Horton 1981: pers. comm.).

Figure 11. Alberta Agriculture: Boundaries of Agricultural Regions

North West Agricultural Region

South of the Peace River Region is the North West Agricultural Region. This agricultural region extends eastwards from the eastern edge of the Willmore Wilderness and Jasper National Park. The Edmonton Regional Planning Commission is located in the southeastern corner of the region (see Figures 10 and 11). The newly established Yellowhead Regional Planning Commission will largely coincide with the western part of this agricultural region. With the exception of the extension of the White Area along the McLeod River as far west as Edson, the greater proportion of the western and northwestern part of this region is in the Green Area. Consequently, concentrations of population and the more productive farmland largely coincide with the area covered by the Edmonton Regional Planning Commission and the local authority areas immediately to the north.

Although there would appear to be occasional conflicts between recreation and agriculture throughout the region, the main area of confrontation is in the rural-urban fringe areas of Edmonton (J.A. Tackaberry 1981: pers. comm.). Country residential development in the counties of Parkland and Strathcona also give rise to problems (see Chapter IV). Tackaberry (1981: pers. comm.) is of the opinion that many landowners who suffer from trespass and vandalism do not report the incidents, causing difficulty in establishing a realistic appraisal of the extent and significance of the problem. The main issue is more frequently that of an inconvenience and nuisance factor rather than physical damage (J.B. Tackaberry 1981: pers. comm.) and, therefore, there is less likelihood of reporting such incidents (see Jansson 1970).

The root of the problem in many instances is the widening gap between urban and rural attitudes and, particularly, the declining proportion of the population in the region (and in the province as a whole) which has a knowledge of agriculture and, consequently, a respect for the countryside and the farmer who is trying to obtain a livelihood from the land (J.B. Tackaberry 1981: pers. comm.). However, the significance of the recreational use of agricultural land in a multiple-use situation is difficult to determine in the region. It is interesting to note that no issue involving recreation on agricultural land was mentioned during the public hearings that took place following completion of the Draft Regional Plan for the Edmonton Regional Planning Commission area (M. Ojamaa 1981: pers. comm.).

North East Agricultural Region

The North East Agricultural Region does not coincide with any of the regional planning commissions in the province (see Figures 10 and 11). Problems associated with the recreational use of agricultural land do occur within the region but have not reached significant proportions (R. Berkan 1981: pers. comm.). Pattison's (1973) examination of public hunting on private land included the southern part of the region and showed an increase in posting and indicated that damage to crops was the most frequently reported type of inconvenience to the farmer. According to Berkan (1981: pers. comm.), most of the posting is in the form of "hunting with permission only."

The main recreation attraction of the region is the Lakeland region with its associated water-oriented activities including fishing, boating, swimming, shore-based activities and, particularly, lakeside cottage development (Nowicki 1969). As a result of the proposal to

develop the oil sands resource in the Cold Lake Region, considerable attention has been focussed on this part of the province (see Alberta Municipal Affairs 1980b) and, particularly, the recreation potential of the Cold Lake Region (Alberta Municipal Affairs 1978, 1979, Alberta Recreation and Parks 1980, Marshall, Macklin, Monaghan 1979).

It is anticipated that should the development of the oil sands take place unprecedented demands on the land and water resources of the area will likely occur (Alberta Municipal Affairs 1980). Apparently, "the long-term viability and future development of agriculture is ...being increasingly threatened by competing land uses such as petroleum exploration and extraction, residential, recreational, and industrial (uses)." (Alberta Municipal Affairs 1980, p. 9). Policies associated with recreational use of the area include a regional park system, the purchase and upkeep of large tracts of high capability lakeshore within the region, the designation of upland recreation areas and the establishment of recreation corridors involving a trail system along the Beaver and Sand Rivers (Alberta Municipal Affairs 1979). Not surprisingly, the agricultural sector is anxious about the possible impact of these policies, should they become implemented, on the agricultural base of the region and particularly, the potential loss of important grazing areas (R. Berkan 1981: pers. comm.). In addition, if the proposals included in the *Grand Centre/Bonnyville Regional Tourism Development Alternatives* (Marshall, Macklin, Monaghan Ltd. 1979) are carried out, the more structured provisions for tourism are likely to have a substantive effect on the region (see Chow 1980, Pigram 1980).

North Central Agricultural Region

The North Central Agricultural Region (see Figure 11) involves three regional planning commission areas (see Figure 10). All of the Battle River Regional Planning Commission area and most of the Red Deer Regional Planning Commission area coincide with this Agricultural Region. In contrast, only Special Area 4 of the Palliser Regional Planning Commission area is involved.

The east-west orientation of the North Central Agricultural Region means that included within this region are the mixed farming areas of the east, the predominantly livestock areas of the central portion and west central areas, and the marginal fringe on the edge of the Green Area in the west (see Thompson 1981). Not surprisingly, the significance of the recreational use of agricultural land also varies considerably, both in extent and type within this region.

In the east the pressures on agricultural land result mainly from the hunting of waterfowl, upland game birds, and ungulates (see Glasgow 1981, Pattison 1973, A.D. MacKenzie 1981: pers. comm.). The predominantly agricultural character of the eastern part of the region, together with the absence of a major centre of population, results in minimal recreation pressure on farmland except during the hunting season (A.D. MacKenzie 1981: pers. comm.).

Although the Battle River Regional Planning Commission extends into the Edmonton-Calgary corridor, such recreation demand that does occur is largely absorbed by the existing lakes and associated provincial parks (see Figure 5). As a result, the question of outdoor recreation on agricultural land was not considered to be a significant issue in the preparation of the

regional plan (Battle River Regional Planning Commission 1981), and neither is it expected to become a planning or land management problem in the foreseeable future (R.A. Hutchinson 1981: pers. comm.). However, increasing demand is being expressed for country residential development in the region (Battle River Regional Planning Commission 1981) and, consequently, the recreation implications of this form of development (see Chapter III), together with increasing recreation pressure on shorelines and river valleys, could create problems for adjacent farmland in the future.

Considerable reference has already been made in this study to the involvement of the Red Deer Regional Planning Commission in planning issues involving both recreation and agriculture (see Red Deer Regional Planning Commission 1975, 1976, 1978a, 1978b, 1978c, 1981a, 1981b). Particularly significant problems associated with the recreation-agriculture interface include country residential development and the pressures on lake shorelands and the major river valleys found within the region. Conflict between the agricultural community and recreationists were noted in the preparation of the regional plan, the pilot project of the Little Red Deer River and the management plan for Pine Lake (W.G.A. Shaw 1981: pers. comm.).

On the basis of the tourism destination study undertaken by the InnTrec Group Ltd. (1981) for West Central Alberta there are numerous development opportunities for tourism, a number of which will involve the agricultural sector.

South Central Agricultural Region

The South Central Agricultural Region coincides with the Calgary Regional Planning Commission in the west and the west central part of the region and the Palliser Regional Planning Commission area in the east (see Figure 10 and 11). Mention has already been made in this study to the fact that the grasslands of the eastern part of this region have only low or very low capability for outdoor recreation. The exception is hunting for ungulates and upland game birds on the grasslands themselves and in the river valleys, (see W. Glasgow 1982) and for waterfowl around the numerous small lakes and sloughs. Consequently, recreational pressures and their significance are determined largely by the pressure of hunting. The only other problem of significance is acquiring access across farmland to the rivers for canoeing, fishing, and other water-based activities.

Understandably, the significance of the recreational pressure on farmland increases considerably in the Calgary Regional Planning Commission area. Most of the problems associated with the growing demand for recreation opportunities which occur in the rural-urban fringe, the river valleys and the rangelands extending into the foothills have already been noted in this study. Particularly significant are the repercussions of country residential development and problems of access to the Bow River. The magnitude of these problems is predominantly a reflection of the large population contained within the city of Calgary and the inevitable pressure it puts on the city's recreational hinterland (A. Reimer 1981: pers. comm.).

Southern Agricultural Region

The boundaries of the Southern Agricultural Region coincide with two regional planning commission areas. In the east is the Southeast Alberta Regional Planning Commission

(formerly the Medicine Hat Regional Planning Commission) and the western part is under the jurisdiction of the Oldman River Regional Planning Commission (see Figures 10 and 11). The character of the Southern Agricultural Region continues to be predominantly agricultural and even the urban communities have a strong farming focus. This situation, together with the fact that there are few major urban centres, results in the relative absence of recreation-agriculture conflicts commonly found in clearly defined rural-urban fringe areas (C.S. Clark 1981: pers. comm.). Nevertheless, the demand for country residential development has been recognized as a planning issue by both the Southeast Alberta Regional Planning Commission (1981) and the Oldman River Regional Planning Commission (1977).

The mixed grasslands of the southeast part of Alberta have only limited capability for outdoor recreation and any areas of concentration of recreation activity that do occur tend to be associated with the major river valleys such as the Red Deer (including Dinosaur Provincial Park), the Bow, the South Saskatchewan and the Milk Rivers, the unique Cypress Hills and the associated provincial park and the limited number of water bodies that exist in the region (IBI Group 1979). Although the irrigation reservoirs are the predominant water bodies in the area covered by the Southeast Alberta Regional Planning Commission, their usefulness as a recreation resource is limited by the large amounts of drawdown which occur and the strong winds that can be dangerous for small boats. "Irrigation water use is highly competitive with recreation almost to the point of mutual exclusion in some cases" (Alberta Environment 1976, p. 35). Compounding this limitation on the use of water bodies for recreation is the fact that access is severely limited to most of these lakes and reservoirs because of the predominance of a high degree of private ownership, reflecting the heavy agricultural usage of these areas (Alberta Environment 1976). Consequently, trespassing across private land in order to gain access to water bodies including rivers is a major issue (Medicine Hat Regional Planning Commission 1978, S. Welling 1981: pers. comm.), particularly when environmental damage and vandalism are involved.

Unauthorized entry onto private lands for the purpose of hunting for waterfowl, upland game birds and ungulates, especially antelope, is a major concern (IBI Group 1979). The problem of public access to grazing land held under a lease disposition is particularly significant in the extensive areas of public lands under dryland farming and ranching in the southeast portion of the region where long-time lease holders have developed a private ownership attitude to public land (IBI Group 1979).

A number of the observations made in connection with the problems of the recreational use of agricultural land in the Southeast Alberta Regional Planning Commission area apply equally well to the eastern half of the Oldman River Regional Planning Commission. Hunting and access problems predominate on the mixed grasslands with their extensive areas of grazing land. A particularly sensitive area is the Milk River area involving conservation interests (D. Pachal 1981: pers. comm.), the farming community and hunters.

With regards to the rancher-hunter relationship, there is a project to improve relationships between these two interest groups involving the Southern Alberta Outdoorsmen and the local ranching and farming community. Evidence suggests that the main issues are access to land, clarification of laws relating to trespass and stricter enforcement when appropriate (T. Bateman 1981: pers. comm., L.E. Dunn 1981: pers. comm., C. Hasay 1981: pers. comm.).

Further west the grasslands of the foothills provide opportunities for a variety of dispersed recreation activities. The impact of recreation on agricultural land in this area has already been documented in this chapter under the section dealing with the marginal fringe.

Summary of the Regional Assessment

The significance of the impact of the recreational use of land under agriculture varies considerably across the province. On the basis of the regional analysis further evidence is given to the position taken earlier that recreation pressure takes on significant proportions in the rural-urban fringe, the grasslands of the foothills and in areas recognized for their hunting potential. The key factor in most of these instances is the numbers of people involved. In concluding this section, it is interesting to note that the annual reports of the Farmers' Advocate in recent years have not included any problems reported by farmers which can be clearly identified as being due to the recreation use of agricultural land. Although there are, therefore, grounds for suggesting that recreation impacts are less significant for the farming community than those resulting from linear developments and resource extractions, it would be naive not to acknowledge that problems do occur (H. Entrup 1981: pers. comm.).

RECREATIONAL USE OF AGRICULTURAL LAND: THE RECREATIONISTS' PERSPECTIVE

Introduction

Discussion on the recreational use of agricultural land in this chapter has been predominantly from an agricultural and planning agency perspective. However, if a balanced appraisal is to be made of the situation it is equally important to acquire an insight into the issue from the point of view of the recreationist. This requirement is all the more relevant bearing in mind the increasing demand for outdoor recreation opportunities (Chapter I) and the fact that government policies are likely to put more emphasis on the use of rural land outside parks for accommodating at least some of this increase in recreation pressure.

Consequently, a limited number of contrasting types of outdoor recreation activities have been selected to illustrate this perspective. For convenience, the activities chosen have been divided into three groupings: (1) off-road vehicles; (2) non-consumptive forms of outdoor recreation; and (3) consumptive forms of outdoor recreation.

Off-Road Vehicles

One of the recreation activity groups which probably receives the most criticism from both landowners and other recreationists is that which uses off-road vehicles. According to Nicholes (1980, p. 127) a number of the problems associated with off-road vehicles can be broken down into the following three areas: "(1) a stereotyped image leading to unrealistic attitudes and actions towards the vehicle and its operator by the uninformed; (2) no standard base of definition, resulting in (3) poor inter/intracommunication."

There are many kinds of off-road vehicles including motorcycles, four-wheel drive vehicles, dune buggies, and snowmobiles. The most commonly used definition of off-road vehicles

implies the use of the machine without the restriction of remaining on a road, trail or linear corridor (Nicholes 1980). However, for a significant proportion of users, particularly in the four-wheel drive category, recreation vehicle use is largely restricted to existing trails and linear corridors such as road allowances and cut-lines (M. Robinson 1981: pers. comm.).

Another important aspect in understanding the use of off-road vehicles as part of a recreation experience is recognition of the different relationships between the user and the vehicle. Four categories have been used by Nicholes (1980, p. 128). They include: (1) the learning experience; (2) unstructured use of the vehicle to produce the recreation in and of itself; (3) use of the vehicle in structured competition and (4) the vehicle being used as a means of transportation for participating in other recreation activities including camping, fishing, picnicking, and hunting. Examples of all four categories were encountered during the preparation of this study.

Nicholes (1980, p. 128) has noted that "stereotypes of ORVs have emerged over the years and persist in the minds of a large portion of the population." Typical complaints levelled against off-road vehicles and their users include: (1) disregard for environmental ethics; (2) conflict with non-mechanized recreationists because of noise, air pollution, and ecological damage; (3) harassment and frightening of livestock; (4) disruption of wildlife and their habitats, (5) accelerating erosion process on farmland and rangeland; (6) disregard for property boundaries; and (7) damage to cropland (see Rocket 1978/79).

Snowmobiles

Snowmobile use has become a controversial winter-time activity in northern climates and the issues surrounding this use in Alberta have received considerable attention (see for example, Samoil 1971, Smith 1976, and Wong 1979). At the present time there are approximately 80,000 operating snowmobiles within the province (D. Blakeman 1981: pers. comm., B. Clark 1981: pers. comm.). Membership of the Alberta Snowmobile Association numbers approximately 10,000 which is only a small proportion of the estimated 240,000 users (D. Blakeman 1981: pers. comm., B. Clark 1981: pers. comm.).

A number of conditions influence the use of farmland by snowmobiles. An important factor is that many snowmobile owners are farmers who use the machines for both farm work and recreational purposes. Consequently, a considerable amount of snowmobiling is carried out by farmers and their families on their own land or land occupied by friends or relatives. In these instances there is no conflict between landowner and recreationist. A second factor is that snowmobiles are precluded from provincial and municipal parks and their use is not encouraged in national parks. Although extensive use is made of the Forest Reserve Land in the Green Area (B. Rogers 1981: pers. comm.) the use of this resource area is restricted to weekends because of the distances involved in reaching them for a large proportion of the population of the province. Therefore, the use of farmland is partly a reflection of lack of alternative areas for using the machines as well as the convenience factor.

Problems of obtaining access to farmland vary considerably, but grain farmers are generally more favourably disposed towards permitting access as compared to the operators of livestock enterprises. The reasons for this difference in attitude include fewer fences to limit

cross-country travel and, therefore, less likelihood of damage, less likelihood of disturbance of livestock, and fewer problems resulting from snow compaction.

One of the major issues associated with the use of snowmobiles on farmland, according to farmers, is the compaction of the snow with the resultant drop in temperature in the ground layer. As a result, forage crops and particularly alfalfa suffer winter kill. This argument is largely rejected by snowmobilers (D. Blakeman 1981: pers. comm.). However, evidence from research on the effects of snowmobiles on the environment is difficult to generalize and certainly questions the validity of many of the emotive criticisms made by both snowmobilers and landowners (see Block 1977, McCool 1978, Wall and Wright 1977).

Terrain favoured by snowmobilers exhibits a relative degree of variety in both topography and vegetation cover. This environment is similar to that favoured by other recreationists, including cross-country skiers, and, as a result, some conflict has occurred between these two user groups (see Wong 1979). Largely because of the greater reliability of the modern snowmobile, there is a distinct trend towards touring rather than confinement to a limited area (D. Blakeman 1981: pers. comm.). As a result, the need for recreation corridors, including provision for snowmobilers, needs to be considered (see Smith 1976). Although such trails and corridors may be relatively easily established on the public lands in the Green Area, the greatest need exists in areas adjacent to the centres of population in the White Area. As a result, initiatives need to be made for negotiating access agreements and easements within the rural environment of the White Area.

Despite the fact that the Alberta Snowmobile Association promotes snowmobiling as a family form of recreation and stresses the importance of responsible behaviour and consideration for landowners and their property, it is recognized that not all snowmobilers necessarily adhere to these guidelines (D. Blakeman 1981: pers. comm.). Consequently, with the increase in the number of snowmobilers and the declining access to suitable land, further confrontation is a possibility with the agricultural sector and other recreationists unless positive moves are made to accommodate this activity.

Four-Wheel Drive Vehicles

Another form of off-road vehicle which has received considerable criticism from the farming community during this study is four-wheel drive vehicles. The usual complaints made by farmers are those of disregard for private property, unauthorized access, detrimental impact on the environment, and disturbance of livestock. Not infrequently, the complaints voiced against four-wheel drive vehicles are in connection with hunters using these vehicles during the hunting season.

There are approximately 700 members in the Alberta Four Wheel Drive Association (Alberta Four Wheel Drive Association 1978) representing only a very small proportion of the approximately 100,000 four-wheel drive vehicle owners in the province (M. Robinson 1981: pers. comm.). Consequently, although the association emphasizes the family orientation of the activity and the use of the vehicles to participate in other activities such as camping, hunting and fishing, the irresponsible behaviour of a small number of four-wheel drive owners has created an unfortunate image for this form of recreation activity (M. Robinson 1981: pers. comm.).

Productive farmland offers little attraction to the four-wheel driver and, consequently, it is the marginal fringes of the Green Area and the forested areas themselves that offer the greatest opportunities. Concern was expressed by the association as part of its submission to the Public Hearings on the Environmental Effects of Forestry Operations in Alberta in 1978 (Alberta Four Wheel Drive Association 1978) that insufficient consideration was being given to this legitimate type of outdoor recreation activity. One area which has been provided for four-wheel drive vehicles in the Bragg Creek area has become overused by motorcycles to the extent that the area offers little attraction to four-wheel drive vehicles. (M. Robinson 1981: pers. comm., Rockett 1978/79).

Robinson (1981: pers. comm.) suggests that, although there are inevitably some owners of vehicles who do test their vehicles against difficult terrain, such as in creeks and river valleys and in the forested areas of the Eastern Slopes, most owners are content to remain on trails. He contends that access to public land should not be withheld if the condition of the vehicle remaining on the existing trails is adhered to. He feels one of the problems in seeking permission to access public land under grazing leases, such as in the rangelands of the foothills, is the difficulty of identifying and then contacting the rancher who holds the lease.

Motorcycles

Many of the observations made in relation to the four-wheel drive vehicle apply equally well to the motorcycle in terms of the complaints raised by the farming community against the use of this type of vehicle on farmland. Rudi Zacsko (1981: pers. comm.) suggests that very little biking takes place on productive agricultural land. He contends that, although some indiscriminate use of land is inevitable, this type of behaviour does not involve members of organized groups. Although arrangements are made with private landowners for the purpose of holding organized events such as motor cross and cross-country racing, the opportunities for the impromptu use of the bike on weekdays is a major problem. Zacsko (1981: pers. comm.) recognizes that trail bikes have a significant impact on the environment and as a result feels that provision should be made for motorcycles and other off-road vehicles to have access to appropriate areas of land which, on a scheduling system, could be used by motorcycles, four-wheel drive vehicles and snowmobiles.

Off-Road Vehicles: Summary

The use of off - road vehicles for recreation is a contentious issue involving both the recreationists and the landowners (see Oldman River Regional Planning Commission 1979). The evidence acquired during this study tends to support Nicholes' (1980) observation that there is frequently a stereotyped image of the off-road vehicle owner which has adversely affected communication with recreation groups and landowners. Off - road vehicles do introduce a different dimension into the provision of recreation open space. The problem derives largely from the environmental impact and the greater mobility afforded by a vehicle. However, it would appear that the irresponsible use of these vehicles is restricted to a relatively small proportion of the total number of operators. Moreover, productive agricultural land, particularly arable land, offers relatively little attraction for most of these user groups and their presence on agricultural land in most instances is associated with attempting to reach more interesting or challenging terrain. In conclusion, there is a general feeling by

by the operators of the off-road vehicles that they have yet to be recognized as legitimate recreationists seeking a recreation experience and, consequently, provision for their needs has not received the same level of attention that has been shown to other recreationists (see Rocket 1978/79).

Non-Consumptive Forms of Outdoor Recreation

Introduction

Non-consumptive forms of outdoor recreation involve a wide range of activities of both an active and passive nature. Included within this broad category are activities such as picnicking and walking which are extremely popular (see Table 14), but are difficult to monitor because of their informal nature and their ubiquitous use of rural land. In addition to these and other traditional recreational uses of agricultural land (for example, horseback riding), is the growing involvement in activities which have previously been largely confined to park areas and forested areas but which are now using private farmland as a resource area. An example of this trend is orienteering. In comparison with the types of recreation discussed in the previous section, that is, where a machine is an integral part of the recreation experience, participants in the more passive forms of outdoor recreation have engendered relatively little hostile reaction from the farming community.

The discussion of non-consumptive forms of outdoor recreation focusses on the following activities: (1) cross-country skiing; (2) hiking; (3) conservation interests; and (4) canoeing.

Cross-Country Skiing

On the basis of the Alberta Recreation and Parks *Public Opinion Survey on Recreation* carried out for 1980 it has been estimated that 155 persons per 1000 participated in cross-country skiing (see Table 14). In the United States cross-country skiing is the fastest growth recreation activity (U.S. Department of the Interior 1979) and data for Canada shows substantial increases in the popularity of this outdoor winter activity (see Tables 10, 11, and 12). One of the reasons given for the dramatic increase in levels of participation is the convenience of involvement without having to travel very far to find a suitable location (Newby and Lilley 1980). This aspect of convenience is supported by reference to the findings of Pattison (1974) (see Table 19).

The use of agricultural land by cross-country skiers is, however, due to factors other than solely those of convenience. Open farmland, particularly if it includes slightly varied topography and natural vegetation, provides an attractive and interesting setting (for example, the Blackfoot Grazing Reserve). In addition, the use of farmland for cross-country skiing is in part a reflection of the lack of alternative areas. Considerable areas of public land are not suitable for cross-country skiing because of their dense tree cover (L. Wall 1981: pers. comm.). Furthermore, little specific provision for cross-country skiing has been made in either the Green Area or provincial parks. However, Provincial Parks is beginning to place increasing emphasis on providing for this winter recreation activity. As a result, suitable agricultural areas in the rural-urban fringe provide convenient locations for evening and day use areas for cross-country skiing which may be supplemented at weekends by the use of areas in the Green Area and the National Parks.

Wall (1981: pers. comm.) suggests that many cross-country skiers prefer groomed trails and therefore there are increasing pressures on the facilities provided within Capital City Park in Edmonton and in Elk Island National Park. Nevertheless, a large proportion of cross-country skiers do seek out the opportunity to "break" new trails on untouched agricultural land.

There are few reports of conflict between coss-country skiers and farmers (L. Wall 1981: pers. comm.), whereas there tends to be more conflict between cross-country skiers and snowmobilers (see Wong 1979). The compatibility between cross-country skiing and agriculture is demonstrated by the private development of cross-country skiing opportunities in conjunction with ranching. The cross-country ski hostel, "Terratima", at Rocky Mountain House provides an example of this type of operation (L. Kennedy 1981: pers. comm.). Wall (1981: pers. comm.) anticipates the further development of this type of private enterprise, particularly in areas of rolling topography which offer a variety of trails for a range of skill levels (see also InnTrec Group Ltd. 1981). In areas closer to urban centres, such as in the rural-urban fringe, increasing levels of use might require the negotiation, in due course, of a "gentlemen's agreement" between cross-country ski clubs and landowners in order to ensure access, while at the same time offering an element of security for the landowner (L. Wall 1981: pers. comm.). Nevertheless, the use of agricultural land for cross-country skiing provides a good example of "phased" multiple use where the winter-time occurrence of the recreation activity appears to cause minimal disruption and inconvenience for the landowner.

Hiking

Walking for pleasure is a major recreation activity (see Table 14). However, most statistics relating to walking fail to distinguish between the relative significance of the impromptu short walk as opposed to the pre-planned and more lengthy hike in accounting for these high levels of participation. In both cases, the quality of the trail is frequently a significant factor in determining the quality of the recreation experience. There is also the important consideration that a well designed trail from the point of view of layout and the location of access points or trail heads can accommodate the needs of both the casual walker and the serious hiker.

Activities such as hiking and horseback riding have traditionally depended upon trails, but increasing participation in snowmobiling, cross-country skiing, bicycling, and nature and heritage interpretation has made the establishment of more trails a necessity. Although trails are recognized as an integral part of a recreation system (Alberta Recreation, Parks and Wildlife 1978, Deeg 1977, Edmonton Regional Planning Commission 1979, Red Deer Regional Planning Commission 1978a), little progress appears to have been made in establishing a trail system in the province. As a result, "Alberta has a piecemeal out-of-date trails network." (Deeg 1977, p. 54).

The majority of hiking trails are located in the mountains, national parks, and the Eastern Slopes and are too far from most urban centres to provide convenient opportunities for walking and hiking. In contrast, those trails that are closer to centres of demand are almost exclusively found in provincial parks or the larger municipal parks. Consequently, the recreational potential of the agricultural landscape as a hiking and walking environment is largely undeveloped. However, there are exceptions, most notably the Waskahegan Hiking

Trail near Edmonton, the Athabasca Landing Trail and the Chinook Hiking Trail around Calgary. A distinguishing feature of these trails is that they have been established predominantly through the efforts of the individual association rather than by provincial or local government.

In the case of the Waskahegan Trail around Edmonton, approximately 85 percent of its 125 miles is located on private farmland, 10 percent crosses public land and the balance of 5 percent uses forest reserve land (S. Skirrow 1981: pers. comm.). Although the trail is used throughout the year (cross-country skiing in the winter) the pattern of use is predominantly on a day-use basis.

An aspect of the trail which is relevant to the possibility of establishing additional trails on agricultural land in the province is that there are no written agreements between the Waskahegan Trail Association and the owners of the private land through which the trail passes. Existing arrangements are verbal or handshake agreements with the understanding that landowners can terminate their permission to allow access at any time. Although this arrangement might be satisfactory for the landowner, the element of uncertainty that prevails is not ideal for the recreation interest.

The reluctance of landowners to enter into more formal and legalized access agreements to private land has been noted by Cullington (1980a) in her study of the public use of private land in Ontario. According to Cullington (1980a) two reasons are given for this attitude. First, the fear that the trail could be taken over by government without compensation and second, the anxiety that the trail might be abused by non-permitted uses such as trail biking and snowmobiling. In the case of the Waskahegan Trail, landowners have experienced some trouble with snowmobilers but not with trail bikers (S. Skirrow 1981: pers. comm.).

For the most part, however, there would appear to be minimal impact on productive farmland. In the first instance, the trail route is located on rough pasture land wherever possible and the landowner determines the alignment of the trail across his land. Second, the Association encourages hikers to use the trail as members of the Association. As a result, the Association acts as its own policing and supervisory agency with the result that there has been very little vandalism in connection with the trail. Another factor that is responsible for the good relationship between the landowner and the Waskahegan Trail Association is that the trail does not receive excessive use at the present time. Consequently, both the Association and relevant landowners would be concerned if the popularity and resulting use of the trail increased beyond its carrying capacity (S. Skirrow 1981: pers. comm.).

In contrast to the predominantly hiking function of the Waskahegan Trail, the Athabasca Landing Trail is intended to eventually become a recreational, environmental, cultural, and educational corridor (J. Czypionka 1981: pers. comm., see also Heron and Seale 1981). At the present time, agreements with landowners along the trail route are handshake agreements. However, the Trail North Foundation intends to negotiate more formal access agreements where possible which would put caveats against the property in order to safeguard the trail in the event of a change in landownership.

A number of problems regarding access have been encountered in those instances where the trail runs through fish and wildlife protection areas and across public land under the disposition of grazing leases. The other situation where access permission is difficult to obtain is in areas where there has been country residential development (J. Czypionka 1981: pers. comm.).

On the basis of the existing studies mentioned at the beginning of this section, there is a need for the establishment of trails for hiking and other linear oriented recreation activities. At the same time, the brief review of the two trails in existence which utilize private land illustrates a number of issues. Not least among these issues are: (1) the nature of the access agreement; (2) concern by the landowner that non-conforming activities will use the trail; (3) problems of trail-use supervision and control; (4) trail maintenance; (5) compensation for damages to property; and (6) the legal liability of the landowner (see also Cullington 1980a, 1980b, Ontario Trails Council 1977, Birch Jr. 1979).

In concluding this brief review of trails, a number of observations need to be delineated. While it is obviously impossible to create a network of rights of way through the countryside, as is afforded by the footpath system in Britain (see Swinnerton 1981), the opportunities to create relatively short trails, particularly in the rural urban fringe, should not be overlooked. These trails could be integrated with the reserve land resulting from subdivision development to provide linear recreation resources of local significance (see Edmonton Regional Planning Commission 1979). A second point is that, although the need for a trail system exists, many interest groups, both agricultural and recreational, are anxious about the impact and implications if the recreation corridor concept (see Deeg 1977, Smith 1976) were to be implemented. It is apparent that a more modest program should be initially implemented if the support of the private landowner is to be achieved. Finally, although the establishment of trails may concentrate user pressure into a designated area and therefore reduce the haphazard recreational use of agricultural land, there is the danger that this new opportunity will generate further demand for recreation in the countryside.

Conservation Interests

The viewing of wildlife and natural environments has been a traditional component of many recreation experiences. More recently the need to consider the non-consumptive values of wildlife and their associated habitats has received increasing attention (see Butler 1979, More 1979, Shaw and Zube 1980). The Federation of Alberta Naturalists and the constituent clubs provide an interest group which makes use of rural land, including farmland, for the purposes of viewing wildlife and examining their habitats.

The use of agricultural land by conservationists combines the habitat opportunities afforded by the countryside with the convenience of farmland near centres of population (T. Thormin 1981: pers. comm.). Particularly important are areas of natural habitat such as wetland, woodlots and linear water features and their shorelands. Unfortunately, these environments frequently occur as isolated features on private property and are separated from public rights of way by productive farmland (D. Ealey 1981: pers. comm.). However, very few conflicts appear to have arisen over seeking access across private land.

A more contentious issue is the degree of compatibility between modern agriculture and conservation. De Soet (1974) in his review of the ecological effects of modern agriculture discusses the problem in terms of the fundamental difference between economic production and ecological stability. In modern agriculture the processes of plant and animal production are artificially stimulated in order to maximize production, non-productive natural areas are removed and monoculture is promoted in order to achieve land-use efficiency. Unfortunately, the immature ecosystems which result are largely unstable and are incompatible with natural ecosystems which tend towards diversity, relatively low productivity per unit biomass but which are ecologically stable. Green (1975) has commented on the implications in the countryside in Britain of this increasing polarization of land use between the productive function of agriculture and the protective function of nature conservation.

In Canada, the Canadian Nature Federation (1980, p. 1) has stated that:

> *Current agricultural practices such as the removal of vegetative cover, wetlands, misuse of herbicides and fertilizers and uncontrolled burning by farmers can have severe impacts on wildlife and its habitat while at the same time reducing agricultural productivity in many ways.*

As a result, the Federation (1980, p. 2) has called for a national rural land-use strategy which would recognize the important role of wildlife in an agricultural economy, and which would increase the ecological awareness of farmers and provide incentives to maintain wildlife habitat on agricultural land.

The impact of many contemporary farming practices which aim at increasing agricultural output through the improvement of physically marginal areas such as wetlands, the clearing of wooded areas, increasing stocking on rangelands, and the use of pesticides and fertilizers, all of which reduce the wildlife habitat value of many rural areas, has been noted by many sources in Alberta (see Glasgow 1981, Sanderson 1981, D. Ealey 1981: pers. comm., R. McElhaney 1981: pers. comm., T. Thormin 1981: pers. comm., T. Fergurson 1981: pers. comm.). Glasgow's (1982) study *Fisheries and Wildlife Resources and the Agricultural Land Base in Alberta,* which has been prepared as one of the background reports for the Environment Council of Alberta, provides an in-depth analysis of many of these and related issues.

There are a number of habitat protection and enhancement schemes including Ducks Unlimited, the Buck for Wildlife program and other projects which involve the Alberta Fish and Wildlife Division (see Glasgow 1982), but the primary objective of these programs is the improvement of opportunities for hunting and fishing (consumptive forms of outdoor recreation). Although these programs may benefit non-game species this is not always the case. Consequently, there is a body of opinion that believes that Fish and Wildlife agencies should pay greater attention to the non-consumptive values of fish and wildlife and their associated habitats (Butler 1979, D. Ealey 1981: pers. comm.).

Another issue that has been raised by conservation groups such as the Federation of Alberta Naturalists and the Alberta Wilderness Association has been the land management practices being followed on grazing reserves. "Grazing reserves are community pastures which are financed, developed and operated by the Public Lands Division for the use of local farmers and ranchers" (Alberta Energy and Natural Resources 1981a, p. 34). The reserves are

generally developed on lands which have severe or very severe limitations for crop production because of adverse topography, soils and drainage. As a result, "...they frequently require a significant financial outlay for development" (Alberta Energy and Natural Resources 1981a, p. 34), which represents a subsidization of the farming community and which cannot be justified as solely an economic benefit in the short run (Cooke 1981, see also Toma 1979). However, the long term objective of the grazing reserve program "is to assist in the development of a diversified and stabilized local agricultural economy and to provide for the efficient utilization of the public land resource." (Alberta Energy and Natural Resources 1981a, p. 34). In addition, the varied topography and associated vegetation of many grazing reserves provide valuable wildlife habitats together with opportunities for dispersed forms of outdoor recreation (Environment Council of Alberta 1979, D. Ealey 1981: pers. comm., D. Pachal 1981: pers. comm.).

The integrated management plans that have been prepared for a number of these reserves, including the Blackfoot Grazing Reserve and the Rocky Mountain House Grazing Reserve, have advocated extensive clearing of the existing treed areas in order to improve the grazing. Wildlife and recreation interests have suggested that this approach will have a detrimental effect on both the wildlife and recreation capability of the area (D. Ealey 1981: pers. comm., D. Pachal 1981: pers. comm.). These non-agricultural interests have argued that the plans represent an excessive emphasis on the grazing role of this public land and that insufficient consideration has been given to the economic and social values of the other land-use interests involved.

Similar concern has been expressed about the level of consideration being given to conservation interests and the provision for public access in the case of the integrated resource plan for Beaver Hill Lake (D. Ealey 1981: pers. comm.). The integrated management plans being prepared for these areas of public land within the province illustrate particularly well the numerous difficulties associated with the application of the multiple-use concept.

Canoeing

Canoeing has been selected to illustrate some of the issues connected with the recreational use of water bodies with particular reference to the impact that this category of outdoor recreation has for landowners. A variety of types of water bodies provide opportunities for water-based recreation including natural lakes, man-made reservoirs, and linear water features such as streams and rivers. In nearly all instances the potential conflict between recreationist and landowner involves the question of access.

The problem of access to the shorelands of lakes and reservoirs has already been noted earlier in this chapter (see also Spearman 1978). Although limited consideration has historically been given to incorporating water-based recreation opportunities into the design and subsequent management of many reservoirs, this policy is now changing, particularly in those areas where natural water bodies are limited in both occurrence and quality (see for example, the report prepared by MTB Consultants (1977) for St. Mary Reservoir). However, Benfield (1975) noted in his study of the recreational use of hydro-electric power reservoirs in Alberta that the use of these water bodies and adjacent shorelands was hampered by land ownership patterns, the lack of access, and single use management policies. Lee (1981: pers. comm.) has also mentioned the constraint that the uncertainty of markedly different water

regimes below reservoirs have on the recreational use of rivers for canoeing and other water-based recreation activities.

Although canoeing can take place on a variety of types of water body, rivers tend to be the preferred water environment for approximately 90 percent of the canoeing undertaken by members of the 5000 strong Alberta Canoe Association (C. Lee 1981: pers. comm.). Rivers and their adjacent shorelands are open to a wide range of users, a situation which not infrequently entails conflict of interest (see Environment Views 1979, Sniatynski 1979).

Access to rivers is a particular problem in the White Area where most of the land is in private ownership. Although access is sought wherever possible at bridge crossings, the alignment of many new roads away from the valley floor prevents this means of reaching the river shoreland without crossing private land. Road allowances which are public land and which could afford public access to rivers are unusable when the descent to the river is too steep or where the right of way has been legally or illegally terminated. Because of the seriousness of the access problem to many of the rivers in the province, and particularly those in southern and southwestern Alberta, the Alberta Wilderness Association has sponsored a study to examine this problem (B. Staszenski 1981: pers. comm.).

Another issue associated with the use of rivers and other water bodies for recreation is the problem of determining the boundary between public and private land. The Alberta Public Lands Act stipulates that the beds and shores of all rivers, streams, watercourses, lakes and other bodies of water are owned by the Crown, but the Act does not provide clear guidelines for determining the relevant boundaries. This problem is made even more complicated where water levels fluctuate (Medicine Hat Regional Planning Commission 1978). Consequently, the potential exists for conflict between the landowner and the recreationist over what is public land and what is private land on the edges of water bodies.

Problems also arise on rivers and creeks where farmers extend their fencing into the water in order to ensure access of their livetock to the water and yet prevent them from straying onto other property. With the increasing use by canoeists of the upper reaches of rivers and small creeks, this limitation on access over Crown property could become an area of conflict as well as creating a danger for the canoeist (C. Lee 1981: pers. comm.). A somewhat different dimension of this problem is found in areas where country residential property owners have fenced across creeks in order to maintain the boundary lines of their property.

Another problem is associated with canoe touring where camping areas are required adjacent to the river. Rivers used for canoe touring where there is demand for such facilities include the Red Deer, the Bow, the Highwood, the North Saskatchewan, and the Battle River (C. Lee 1981: pers. comm.).

Finally, it would appear that there is limited conflict between canoeists and fishermen. However, there is the potential for a growing conflict between canoeists and jet boaters and between canoeists and rafters along stretches of white water. Consequently Lee (1981: pers. comm.) has suggested the establishment of a "River Advisory Committee" which would examine these and other issues associated with the use of the province's rivers and shorelands.

Consumptive Forms of Outdoor Recreation

The consumption of fish and wildlife resources played an important role in the early development of the province of Alberta, pre-dating the use of land for agriculture (Kure 1981). Historically, fish and wildlife populations provided subsistence for the natives of Alberta and the early European settlers. The use of this resource for subsistence and its commercial exploitation continued into the 1900s (Glasgow 1982). However, although commercial fishing and trapping and the taking of fish and wildlife as a necessity of life are still very important to some people in Alberta, consumptive sport uses or non-consumptive aesthetic appreciation activities have become more popular (Glasgow 1982).

Because this report is concerned with the use of agricultural land for recreation, the consumption of fish and wildlife is examined solely in terms of fishing and hunting as recreation activities. An additional factor that has influenced the approach taken in this section is that a separate report by William Glasgow (1982) *Fisheries and Wildlife Resources and the Agricultural Land Base in Alberta* has been prepared as one of the other background reports to the Environment Council of Alberta's examination of the security of agricultural land in Alberta. A final factor is that a majority of the issues connected with fishing and hunting on agricultural land, which were noted by the Alberta Land Use Forum (1976) (see Chapter II), continue to be the main areas of concern between landowners and consumptive forms of outdoor recreation.

The maintenance of healthy viable populations of fish and wildlife is dependent on the continued availability of good quality habitat (Alberta Municipal Affairs 1978b). The fact that land with high capability for agriculture frequently overlaps areas having a high capability for fish and wildlife production means that an element of competition results between these two resource sectors (Glasgow 1982). Glasgow's (1982) study examines in detail the habitat requirements and distribution of different species of fish and wildlife in the province and consequently those aspects are not discussed in detail in this report.

Fishing

The importance of fishing as a recreation activity has been noted during the review of patterns of recreation participation in Alberta (Chapter I) and the reference to Pattison's (1974) study. According to the results of the 1978-79 Public Opinion Survey on Alberta's Wildlife Resources carried out by Alberta Recreation, Parks and Wildlife, 56.2 percent of the respondents indicated that they went fishing. Glasgow (1982) in his report notes that the number of angling permits issued in Alberta has increased from 18,658 in 1951 to 289,664 in 1980. However, Carss, Stenton and Psikla (1978) have estimated that approximately one out of every three anglers is unlicensed. (Unlicensed anglers include those under 16 and over 65 years of age who are not required to buy a license, plus people fishing illegally without a license.) Taking this fact into account, Glasgow's (1982) study suggests that the number of unlicensed anglers increased from 7,930 in 1951 to 123,107 in 1980. Over the same period it is estimated that the number of active anglers increased from 23,789 to 369,321. (The number of active anglers was considered to be 85 percent of the number of angling permits bought plus the number of unlicensed anglers.) (Glasgow 1982).

A further information source on the importance of fishing as a recreation activity is a study undertaken by the Select Committee on Recreational and Commercial Fishing Industries in Alberta (1980). The report indicates that the 368,940 anglers active in 1978-79 fished an average of 9.6 days each year and caught over 7.1 million fish. Furthermore, "Alberta's estimated sport fishermen annual expenditures and extra market benefits for 1978-79 exceeded $134 million and $23 million respectively. It is projected that in 1980-81 over $160 million will be spent in pursuit of recreational sport fishing" (Select Committee on Recreational and Commercial Fishing Industries 1980, p. 6) (see also Phillips, De Pape and Ewanyk 1978). Glasgow (1982, p. 24) notes, however, that "a decrease in the size of fish caught and the number caught per day indicate that the demand is now exceeding the supply in many areas of Alberta."

The Select Committee on Recreational and Commercial Fishing Industries in Alberta (1980) noted a number of aspects of fishing as a recreation activity which have implications for landowners and vice-versa. A major concern is the impact of modern agriculture on fish habitats due to bank and soil erosion, eutrophication from runoff and fertilizers, and the introduction of herbicides and pesticides into the water. At the same time, the Committee recognized the importance of improving or developing fisheries habitat throughout the province. Particularly significant in this regard was the creation in 1973 of the Buck for Wildlife fund and a development charge added to the cost of fishing licenses. The major activities currently being undertaken by this program include: (1) protection and maintenance of riparian habitats and streambank stability; (2) development of suitable fish habitat near population centres and water-deficient areas such as southeastern Alberta; and (3) enhancement of fish production in natural lakes and streams by habitat modification.

Public access to fisheries was the other major issue. Although "...public access to fisheries is provided for in a number of ways involving private lands, leased lands, undeveloped crown lands (land sites and/or road allowances), and developed crown lands (parks or organized access sites)" problems have arisen in relation to sanitary control, garbage maintenance, and road and site maintenance (Select Committee on Recreational and Commercial Fishing Industries in Alberta 1980, p. 45). Public submissions to the Committee included the following issues: (1) the loss of access to rivers and streams through the illegal closure of public road allowances; (2) the need to impose stiff fines for people abusing the area or adjacent land; (3) the need for proper site development and maintenance at stocked lakes; (4) the recommendation that the government should buy an adequate strip of land along the banks of rivers and lakes to ensure public access and prevent development and (5) the suggestion that $2 to $3 be added to the cost of a fishing license, with the money collected being used to purchase public access and repay landowners for damage caused by trespassers.

The Select Committee (1980, p. 47) recognized that "the public must be assured right of access to public lands and other public resources which occur on public land." Two other recommendations made by the Committee are also relevant. First, where public reserves are set aside during subdivision construction, these reserves would provide access to and along the water body. Second, a public awareness program should be instituted to educate the public to respect the rights of the private landowner and to prevent damage to the land.

Hunting

Sport hunting is the other form of consumptive recreation which is important in Alberta. On the basis of the 1978-79 "Public Opinion Survey on Alberta's Wildlife Resources," 30 percent of the respondents indicated that they hunted a variety of waterfowl, upland game birds, and big game. Phillips, De Pape and Ewanyk (1977) found that 60 percent of hunters hunted waterfowl, 58 percent hunted big game, and 32 percent hunted upland game birds. According to Glasgow (1982) it is difficult to provide an aggregate figure for hunting license sales because of changes in the licensing system. However, the figures that are available on license sales illustrate the growth in this recreation activity. For example, wildlife certificates during the period 1968-1980 increased from 124,028 to 161,117, whereas migratory bird permits over the same period went from 53,600 to 79,300. The number of resident bird game licenses purchased increased from 39,190 in 1952 to 104,605 in 1980 and resident white-tailed deer licenses acquired went from 13,803 in 1964 to 63,755 in 1980 (Glasgow 1982). Glasgow (1982) also makes the important observation that the proportion of the Alberta population that hunts has remained constant over the last three decades and as a result the increase in the number of hunters is predominantly a reflection of the growth in the province's population.

An indication of the economic values associated with hunting is provided by Phillips, De Pape and Ewanyk (1977). They calculated for the 1975-76 hunting season that the total annual hunter costs were $40,761,955 whereas the total annual extra market benefits were $24,318,250. Non-consumptive recreational values of wildlife are also important. Phillips, De Pape and Ewanyk (1977) estimated that 1,390,980 Albertans over five years of age engaged in non-consumptive recreational fish and wildlife activities in the province during 1975-76. These non-consumptive uses involved bird life enjoyment (34.2 percent), animal life enjoyment (39.6 percent) and aquatic life enjoyment (26.2 percent).

Issues Associated with Fishing and Hunting on Agricultural Land

Reference was made in Chapter II to the problems and conflicts associated with hunting and fishing on agricultural land, which were examined by the Alberta Land Use Forum (1976). A number of studies have examined these specific issues in considerable detail (see Ewanyk 1975, Glasgow 1982, Pattison 1973). In addition, the different interest groups, including the Alberta Fish and Game Association and the agriculture pressure groups, such as Unifarm, the Western Stockgrowers Association, and the Alberta Cattle Commission have their own specific viewpoints on the interface between hunting and agriculture.

Glasgow (1982) has suggested that conflicts between fish and wildlife and agriculture are almost inevitable when different interest groups compete for the same resource base. He identifies three conflict areas: (1) conflict between the fish and wildlife manager who desires to maintain habitat and the agricultural manager who desires to modify or remove habitat on the same land; (2) conflict between wildlife populations and farm managers because wildlife such as ducks, beavers, wolves, bears, and wild ungulates cause damage to farm produce; and (3) conflict between the users of the fish and wildlife resource and the landowners when users trespass on private property.

In order to minimize these conflicts, fish and wildlife managers are developing habitat programs mutually beneficial to landowner and wildlife by implementing preventative measures and paying compensation for problem wildlife damage (Glasgow 1982). One of the major difficulties in implementing such programs however, is that whereas the fish and wildlife are a public resource, approximately 83 percent of the land in the White Area is in private ownership. As a result, private landowners should be compensated for maintaining fish and wildlife on private land. Glasgow (1982) also points out that management programs on private land should be accomplished on a voluntary basis rather than through the use of mandatory legislation (see also Horvarth 1976, Long 1976).

Ewanyk (1976) in his study of hunter-landowner conflicts suggested that there are two interrelated problems: (1) hunter access to game populations; and (2) the production of wildlife on private lands. He suggested that a compulsory hunter training program would help to ameliorate some of the concerns that many landowners have about hunter behaviour on private land. He further suggested that the improvement or maintenance of wildlife habitats on private land could best be achieved by an integrated program involving both a government subsidy for unimproved land and a habitat improvement program.

Pattison's (1973) study identified a number of specific issues associated with the conflict between farmers and hunters. These included: (1) philosophical opposition to sport hunting by some farmers; (2) most farmers felt that hunting pressures were increasing and wildlife populations declining; (3) the most visible evidence of conflict is posting of land against hunting; (4) farmers' opposition to hunting frequently arises from unfortunate experiences with hunters leading to property damage; (5) farmers are uneasy about having hunters on their land, particularly if they are strangers or have not requested permission; and (6) the majority of opposition to hunting from farmers arises from the concern over declining wildlife populations particularly since a large number of farmers enjoy seeing wildlife on their property.

On the basis of his findings, Pattison (1973) suggested that unless the conflict between hunters and farmers could be resolved, further restrictions on hunting activity would likely take place. His recommendations included: (1) implementing a system to enable farmers to benefit financially from the provision and maintenance of wildlife habitat; (2) encouraging the establishment of private hunting preserves; (3) providing information on wildlife management to farmers; and (4) expanding the hunter training program.

It is evident from the three studies mentioned, Glasgow (1982), Ewanyk (1976) and Pattison (1973), that a variety of programs need to be implemented in order to reduce the conflict between the consumptive forms of recreation and the farmer. Equally apparent is the fact that no single solution exists to this complex problem. The complexity of the problem is further highlighted when the issues are expressed from the point of view of the hunter and/or fisherman.

The Alberta Fish and Game Association with a membership of approximately 25,000 represents the views of many hunters and fishermen in the province. Fergurson (1981: pers. comm.) has noted a number of important points that relate to the hunter-landowner relationship. They are: (1) refusal of access to private land is increasing together with an

increase in posting against hunting and general access; (2) a major problem is identifying landowners unless the sign indicates the owner and the means of contacting him; (3) there is an increasing tendency for hunters to preplan where they intend to hunt and to seek permission prior to actually going to hunt on the property; (4) the major problem is the impromptu hunter; (5) the irresponsible behaviour on private land and vandalism is a facet of contemporary society and is not restricted to hunters; (6) the Alberta Fish and Game Association feels that hunters get blamed for irresponsible behaviour, much of which has been perpetrated by non-hunters including other farmers; (7) for the most part there continues to be an amicable relationship between hunters and landowners not least because many hunters are farmers and landowners themselves; and (8) this situation is changing with the increasing proportion of Alberta's population being urban dwellers.

The review of the recreational use of agricultural land from the recreationist perspective has pointed to the danger of generalizing about the impact of outdoor recreation on agricultural land. Indeed, there is a general consensus of opinion that even within individual recreation categories the circumstances that bring about conflict between the recreationist and the landowner tend to be the exception rather than the rule.

RECREATION ON AGRICULTURAL LAND: THE LANDOWNER'S PERSPECTIVE

Although a variety of outdoor recreation activities use agricultural land as a resource setting, it is evident that there is growing concern about the degree of compatibility between these two forms of land use. To a large extent, the use of agricultural land for many forms of recreation occurs by default rather than the outcome of positive planning by the individual landowner or government. An important question is, therefore, whether the benevolent landowner who allows public access to his land is likely to become increasingly reluctant to permit such access because of the growing numbers involved in outdoor recreation. This question becomes all the more pertinent if the government intends to pursue its policy statement of bringing private land into use for recreation purposes (see Alberta Government Recreation Committee 1974). Hannam (1975), for example, has noted that there are three basic problem areas which must be solved before effective public use of private land is achieved: (1) liability; (2) control of the public who use private land; and (3) compensation.

Cullington (1980a) has demonstrated that the amount of private land available for recreation is influenced by a number of factors (Chapter II see Figure 9). In addition, there is obviously a range of attitudes to the use of private land for recreation which ranges from acceptance to resentment or even denial of access (see Cullington 1980a, 1980b). In this regard, there is clearly a major difference between the national attitudes and traditions that prevail in Sweden, where recreation on private land is accepted and expected (Cullington 1980a, Lundgren 1980), or in England and Wales where private land provides a major component of the recreation open space system (Johnson 1971, Swinnerton 1981, Thomson and Whitby 1976), and the situation that exists in Canada where the belief in the inviolate rights of property ownership is strongly entrenched among the farming community (Unifarm 1981). A comparable situation to that existing in Canada largely prevails in Australia (Pigram 1981) and the United States (Church 1979). Cullington (1980a, p. 8) points out that "the attitudes of an individual landowner will result from his personal beliefs and experiences, taken together with the implications of the legal, economic, social and ecological concerns."

She (1980a, p. 28) also indicates that a person's attitude "...represents the willingness of a person to accept or reject an idea, and this willingness is affected by that person's past experience connected to it." The importance of behavioural research in the examination of the recreational use of agricultural land and, specifically, of access to private land, has recently received considerable attention (see Bingham 1979, Brown and Thompson 1976, Cullington 1980a, 1980b, Hannam 1975, Holecek and Westfall 1977, Lee 1981, Lee and Kreutzwiser 1980, Wieser 1979).

This section of the report provides a summary of the experiences, concerns, and attitudes expressed by members of the agricultural community in Alberta regarding the recreational use of agricultural land. Because of the broad consensus of opinion on most of the issues, reference has not been made to any particular agricultural interest group. The information was compiled largely from the informal interviews with representatives from the various agricultural organizations.

The recreational use of agricultural land is not perceived as a major problem by most landowners, either in absolute terms or relative to other pressures which affect farming. However, the tendency for problems to occur predominantly in the rural-urban fringe or the marginal fringe is widely recognized. There is general consensus of opinion that many of the problems can be attributed to ignorance and thoughtless disregard for the farmer and his property rather than the outcome of deliberate vandalism. To a large extent, these problems reflect a lack of knowledge about modern farming practices and are likely to become even more significant as an increasing proportion of Alberta's population becomes divorced, through living in urban centres, from agriculture and the countryside. Nevertheless, it is also recognized that the behaviour of many people on farmland, and not necessarily people involved in recreation activity, shows a lack of responsibility and lack of respect for private property and the rural environment in general. This lack of concern and consideration for other people's property and privacy as well as for the quality of the rural environment contrasts with the attitudes and behaviour patterns that prevail in Britain and Europe.

Although problems do occur, it is generally felt that these are caused by a small proportion of the total number of recreationists who make use of agricultural land. Unfortunately, the attitudes of the landowners towards recreationists in general are strongly influenced by an individual incident which has brought the farmer into a conflict situation with a recreationist. An unfortunate experience or that of a neighbour is frequently sufficient for a landowner to become reluctant to allow the public onto his land. Despite the fact that many recreationists do not like having to ask permission to go onto private land because of the possibility of denial of access, this aspect of courtesy and respect is an important dimension of the access issue from the standpoint of the landowner. Landowners generally regard access to private land for recreation as a privilege, not as a right of a member of the public.

In the majority of instances, the impact of recreationists on agricultural land takes the form of an annoyance, inconvenience or nuisance rather than substantial physical damage which might have economic implications. However, instances of the latter do occur and are important factors in influencing farmers' attitudes towards recreationists. There is also the problem of the amount of time which a farmer has to commit to policing his property if he is in an area frequented by recreationists, such as in the rural-urban fringe and when he is uncertain who is on his land. This anxiety and necessity for vigilance results in less time being devoted to farming activities.

The types of problems over which landowners expressed concern include: (1) litter or garbage dumping; (2) gates improperly closed or left open; (3) cut fences; (4) damage to trees and other vegetation; (5) damage to farm machinery and buildings; (6) disturbance and harassment of livestock; (7) pollution of water courses; (8) trampling and damage to cropland; (9) damage as a result of fire; (10) noise pollution caused by vehicles; (11) the general invasion of the privacy of the landowner; and (12) the indiscriminate use of firearms.

It is recognized that certain forms of outdoor recreation are more compatible than others with agriculture. Generally speaking, there is less concern about land being used for non-consumptive forms of activity such as walking, cross-country skiing, wildlife observation, than for vehicle oriented forms of recreation and hunting. In the case of vehicle-based recreation such as trail bikes, four-wheel drive vehicles and snowmobiles, the issue is the impact that vehicles have on the environment, whether it takes the form of physical impact on the bio-physical environment, crop damage or noise pollution.

With regards to hunting, the concern is closely related to the possibility of livestock being shot as well as the element of danger to humans.

There is apparently a difference of opinion among the farming community as to whether the establishment of more parks would necessarily solve the problems of recreationists using private land. One factor is that the types of recreation which tend to be least compatible with agriculture are not permitted in provincial or municipal parks. Another concern is that the establishment of a park attracts the public to an area and, unless the designated park can adequately accommodate the recreation demand, there is an overflow effect on to adjacent farmland with the ensuing problems for the private landowner. This overflow effect tends to be associated with facility sites with little or no recreation opportunities, such as transportation campsites or informal river access points, rather than specific park areas. A final observation is that many farmers feel that the existing parks could be operated more effectively than they are at present and that this modification would enable these public areas to absorb a considerable amount of the increasing demand for recreation open space.

A further factor which many farmers perceive as a problem associated with the use of their land for recreation is the landowner's rights and obligations towards people entering his land. Although this is apparently not a major concern at the present time its significance could increase with the greater numbers of people seeking access to agricultural land for recreation. At the present time the Occupier's Liability Act specifies the responsibility which a landowner or occupier has to persons using his property with the degree of obligation varying according to whether the person is an invited guest, a trespasser or a child. Nevertheless, many landowners are of the opinion that the legislation as it currently exists still places them in a precarious and unfair situation with regards to the public using their land. Recent legislation in Ontario, The Occupier's Liability Act, 1980, abolishes the common law of occupier's liability and establishes a basic duty of care on behalf of the occupier. Non-paying recreational entrants on most rural land are deemed to willingly assume the risks of injury and the occupier is not liable (Ontario Ministry of the Attorney General 1980).

Compensation owing to the landowner as a result of the recreational use of farmland may take two forms. The first is compensation for damages to property. Under civil law an action can be brought against a person who causes damage to property. However, the

problem from the landowner's viewpoint lies in both identifying the guilty party and then providing sufficient evidence to prove the damages and bring about a conviction. The result is that many landowners feel that the time and effort involved, together with the difficulty of acquiring a realistic award for damages, rarely make the action worthwhile. There is another area of compensation which is associated with the recreationist contributing to the cost of the land he uses. These costs involve those incurred with property ownership as well as any diminuition of opportunity (the opportunity cost) which the actual or potential presence of recreationists may entail for the landowner.

Although the principle of paying compensation to landowners is being applied as a means of protecting wildlife habitats (W. M. Glasgow 1981: pers. comm., Glasgow 1981), its application to safeguarding resources for other forms of recreation is not in evidence. It would appear that most landowners have not seriously considered the payment of compensation to that landowner in order to ensure access to farmland for the purposes of recreation. In those instances where consideration has been given to the issue, concern is expressed about the type and level of commitment and obligation that the landowner has to exhibit towards the recreationist wishing to use his land (see Unifarm 1981).

The most contentious issue regarding the use of agricultural land is in connection with legality of access to land and, particularly, the problem of trespass on public land. The importance of this issue is such that it requires an overview of the problem as a separate section.

ACCESS TO PRIVATE AND PUBLIC LANDS

A common complaint expressed by both landowners and recreationists is the confusion that results from the number of different statutes in Alberta that deal with trespassing (C.S. Brandley 1981: pers. comm.). The unravelling of the debate which has focussed on the interpretation of the various pieces of legislation is beyond the scope of the report. However, a brief summary of the main issues of contention is in order. An examination of the problem suggests that the debate may be divided into two areas of concern which are closely interrelated: (1) the different statutes which directly or indirectly deal with the issue of trespass; and (2) the interpretation of the legal status of public land under the disposition of a lease for agricultural purposes, and the immediate implications that this interpretation has for the relevancy of the various pieces of legislation that deal with trespassing to such public lands.

Statutes Relating to Trespass

In Alberta the issue of trespass is dealt with in four different statutes: (1) Common Law; (2) The Criminal Code; (3) The Petty Trespass Act; and (4) The Wildlife Act. Under the Common Law trespassing is a civil wrong against a person or property in terms of that person's right to immediate and exclusive possession of property. Whenever property is damaged by a trespasser, an action for the actual damages can be maintained against the trespasser. For this action it is *not* necessary to have the land posted, the land fenced, or to live on the land. The essential element is that actual damage was done to the land by the trespasser (Brandley n.d.). Trespass as a civil wrong applies to private land, and public land including a grazing lease, with the actual damages being maintained against the trespasser at the discretion of the judge (Forbes 1981).

Section 41 of the Criminal Code provides that a person in peaceable possession of real property can require a trespasser to vacate the property and may use whatever reasonable force is necessary to remove a trespasser. A person physically resisting a landowner or lessee exercising his rights under Section 41 of the Criminal Code may be charged with assault. In this regard a grazing lessee is a person in possession of real property (Forbes 1981).

The Petty Trespass Act makes it unlawful to trespass upon (1) any privately owned land or (2) crown land subject to any disposition granted under The Public Lands Act, except a grazing lease or a grazing permit, with respect to which notice has been given by word of mouth or in writing or by posters or signboards not to trespass. A person shall be deemed to have had notice not to trespass when posters or signboards are visibly displayed at all places where normal access is obtained to the land and at all fence corners or where there is no fence, at each corner of the land. The Petty Trespass Act does not cover compensation for damage but imposes a fine of not more than $100.00 for a person wrongfully on another person's property.

There are a number of aspects concerning the application of The Petty Trespass Act which are particularly relevant to the recreational use of agricultural land. One aspect is that many landowners in Alberta feel that the fine of a maximum of $100.00 is far too low an amount. The Western Stock Growers Association (n.d.) has advocated that penalties for trespass should be increased to a minimum of $500.00, with damage costs assessed as being equal to the cost of correction. Unifarm (1981) recommends the setting of a $500.00 penalty for persons hunting without permission. In contrast, The Trespass to Property Act, 1980 in Ontario increased the maximum fine to $1,000.00, permitted the same court that convicts a trespasser to make an order for compensation to the landowner for damages of up to $1,000, and allowed the court to require the trespasser to pay the reasonable costs of his own prosecution (Ontario Ministry of the Attorney General 1980, p. 14). A second point is that although an action of trespass cannot be brought against a person on public land under the disposition of a grazing lease or permit through The Petty Trespass Act, the lessee may, nevertheless, bring an action of trespass against a person under Common Law (Forbes 1981, Brandley n.d.). A third factor is that crown lands under grazing leases or permits are often wrongfully posted with "no trespassing signs" (Medicine Hat Regional Planning Commission 1978, D. Pachal 1981: pers. comm.). Such a practice tends to be misleading and there is a need for clearer signage to enable the public to distinguish between public and private land (Forbes 1981). The fourth factor is that, whereas landowners suggest that signs are subject to vandalism and that it is difficult to enforce an action of trespass, the recreationists claim that the signs frequently give no indication of how to contact the owner of a property to seek permission and that a solely negative approach in signage creates a feeling of antipathy between the recreationist and the landowner (T. Fergurson 1981: pers. comm.). Although some signs indicate that hunting is allowed with permission, a more comprehensive system of permissive and prohibitive signage for different activities, similar to that adopted in Ontario, might be appropriate (Ontario Ministry of the Attorney General 1980).

Access to private land for the purposes of hunting is further restricted by the Wildlife Act. Under this Act no one can hunt on occupied lands without the consent of the owner or occupant. On such lands signs are not required (Brandley n.d.). Occupied land is defined in section 20 of the Act as lands privately owned and under cultivation or enclosed by a fence of any kind and not exceeding one section in area (640 acres) upon which the owner or

occupant actually resides and any other privately-owned land which is within one mile of this section and which is owned or leased by the same owner or occupant. A contention in relation to this Act is whether or not a grazing lease holder has all the rights of any leaseholder. It is obvious that depending on which interpretation is taken, there are very important implications for the hunter.

Right of Access to Public Lands

Reference was made in the previous section to the debate over whether grazing leases are private property and, therefore, whether the public must obtain permission from the lessee to gain legal access (see Alberta Wilderness Association 1981a). In March 1981 the Alberta Cattle Commission, the Alberta Fish and Game Association, Unifarm, and the Western Stock Growers' Association sponsored a seminar to examine the issue of trespass and rights of access to public lands.

The position taken by the agricultural interest groups was that the definition of real property includes a grazing lease and that the lessee should have control of access to such land. As a result, the public must obtain permission from the lessee to gain legal access but that this permission could not be unreasonably withheld (see Unifarm 1981, Western Stock Growers' Association n.d., Wilson 1981). The grounds for this argument include: (1) only a small proportion, approximately 4 percent, of crown land is under grazing lease disposition; (2) the lessee has to pay a grazing fee, property tax and is charged with the responsibility of preventing surface damage to the land and (3) leased land is an essential and integral part of the ranch unit.

In contrast, non-agricultural interest groups argue that there are many faults with allowing leaseholders to have control over access (see Alberta Wilderness Association 1981a; Gladish 1981). The bases for their argument include: (1) crown land is public land and should be managed for multiple use, (2) it places the leaseholder in the position of a wildlife manager, and (3) it could lead to discrimination regarding who uses public land. Despite these differing interpretations on access to public land, agreement was achieved on the following points:

1. That permission is required for access to any privately owned lands, whether posted or not.

2. That an educational program be initiated by affected organizations and government to increase the public awareness of land policy, rights, and responsibilities.

3. That a mandatory hunter training program be instituted.

4. That a clear and simple method of identifying and locating land operators be devised for both private and public lands.

5. That legislation be considered to minimize a land operator's liability to trespassers or other users.

6. That a fund be established to compensate a lessee's losses due to damages caused by unknown parties.

7. That a review of legislation pertinent to the rights and responsibilities of landowners, lessees, and the public be undertaken. Acts which would be considered are the Public Lands Act, Petty Trespass Act, and the Wildlife Act.

8. A multi-use concept of crown lands was recognized. It was also recognized that both crown lessees and the public users have rights in public lands. Agreement was not reached on the mechanism of how these rights can be exercised.

Support for three positions was also evident. The first was that the public must obtain permission from the lessee to gain legal access to crown lands (this access could not unreasonably be withheld). The second position was that the public could legally enter all crown grazing leases or grazing permit areas providing they were reasonable in their activities. A third position was that a public user need only notify the lessee as to time and duration of entry.

In June 1981 the Fish and Wildlife Advisory Council recommended that the Government of Alberta move by way of policy and legislation to implement the following:

1. The public has a right of access and egress to public lands under certain circumstances.

2. There should be a limited right of the lessee of crown land to restrict public access for reasonable cause, but the user shall have a right of prompt appeal from such refusal. If on such appeal, the lessee is found not to have had reasonable cause for refusal, appropriate action will be taken.

3. There should be clear legislative limits of liability for lessees of crown lands for any injury occcasioned by users, excepting injuries sustained as a result of lessees placing the land into a dangerous condition and failing to warn them.

4. There should be clear legislative or regulatory prohibition of the use of vehicles on leased crown land, except on recognized and established roadways or trails.

5. The lessee of crown land should have a right of knowledge as to users and there should be a duty imposed on users to use all reasonable effort to inform lessees of their uses. The lessee should, by notice at point of access or otherwise, advise potential users how and where they should comply with their duty to notify.

6. Any user who causes damage on public iands should be held strictly accountable therefore. A fund should be set up and administered to compensate lessees for damages to leased crown land by unknown perpetrators.

7. That an education program be initiated by Government and various user groups to increase public awareness of land policy, rights, and responsibilities.

8. That a mandatory hunter training program be instituted immediately.

A further indication that the issue of access to public land and, specifically, grazing leases, is moving in a positive direction, is that the Public Lands Division, the Fish and Wildlife Division, the Alberta Forest Service, and the Legal Services have agreed that the general principles which apply to public access to grazing lease lands should include the following:

1. Foot access to grazing lease lands should be permitted at all times.

2. Motorized vehicle access to grazing lease lands should be permitted year round. During the main grazing season (May 1 to October 20), users of motorized vehicles should obtain permission from the lessee to enter leased lands where the lessee has posted signs on how he may be contacted. At all times of the year, motorized vehicles should be restricted to established roads and trails.

3. All users are responsible for any damages to forage, livestock, or improvements on grazing lease lands.

4. All access shall be at the risk of the user, except where a lessee fails to make known a hidden hazard of which he is aware.

5. To maintain good relations, all users should, as a matter of courtesy, try to notify a lessee of their intention to enter leased lands.

Despite the numerous statements of principle regarding the issues of trespass and specifically access to grazing lease land, antipathy and conflict are likely to continue between individual ranchers and recreationists until the legislation is simplified and clarified and the Government of Alberta produces a clearly articulated policy and the appropriate legislation.

AGRICULTURAL LAND AS A VISUAL RESOURCE

Although the value of landscape as an amenity resource was alluded to in Chapter I, the subsequent examination of the recreational use of agricultural land has concentrated on the spatial demands that outdoor recreation puts on the land resource base. However, as Cordell, McLellan and Legg (1979, p. 8) point out:

> *Enjoyment of rural lands as a visual and aesthetic resource does not necessarily require on-site access. The main requirement is that tracts visible from roads retain their natural or agricultural character. As a visual resource, these lands enhance the tourism attraction of an area.*

The recognition in North America of the aesthetic value of countryside and the maintenance of its rural integrity is a recent development (Tuttle 1980). Instead, concern for environmental quality as manifested in landscape has been focussed on wilderness areas and the landscape largely devoid of human intervention. This concern for the spectacular has resulted in a neglect for the landscape within which many Canadians spend most of their time, and which is most vulnerable to both the pressures of urbanization and changing farming practices. This attitude is not surprising bearing in mind the perception that most Canadians have of recreation resources (Chapter II). Nevertheless, Dearden (1980) in his landscape

evaluation study of the Saanich Peninsula on Vancouver Island has demonstrated the importance of recognizing landscape as a dwindling resource in the rural hinterland of urban centres. In addition, he (Dearden 1980, p. 51) has suggested that "the need for visual landscape quality assessments is now accepted in most land-use planning agencies."

Despite the work of the Soil Conservation Service in the United States in incorporating visual resource considerations in productive agriculture, Schauman (1979) has contrasted the limited interest expressed by Americans in the visual dimensions of the countryside with the attitudes that prevail in England and Wales (see also Getz 1975). Largely because of the intensity of land-use competition and the realization that agricultural land has an important role to play in accommodating outdoor recreation activities, the need to identify and protect areas of scenic quality has been an integral part of land-use planning policies in England and Wales since the Town and Country Planning Act of 1947 (see Blacksell 1979, Davidson and Wibberley 1977). More recently, the vulnerability of the rural landscape to changes taking place within the agricultural industry itself has become the focus of attention (Countryside Commission 1977, Davidson and Wibberley 1977, Keenleyside 1971, Leonard and Cobham 1977). Consequently, there has been considerable cooperation between the Countryside Commission (the statutory public body charged with keeping under review all matters relating to the provision and improvement of facilities for enjoyment of the countryside and the conservation and enhancement of the natural beauty and amenity both within and outside the national parks) and other rural resource agencies and interest groups (such as the Ministry of Agriculture, Fisheries and Food, the Forestry Commission, the National Farmers Union, the Nature Conservancy Council), the local planning authorities and individual landowners in the adoption of land management practices which will safeguard the visual and environmental quality of the rural landscape (Bucknall 1977, Davidson and Wibberley 1977, Feist 1978, 1979).

There is, however, little evidence in Alberta of the application of visual land quality assessments at either the regional or more local levels of planning. Hutchinson (1978) has demonstrated the application of scenic assessment to the Restricted Development Area between Edmonton and Devon, but the inclusion of landscape assessment at the strategic planning level appears to be absent.

At the local and site specific level the Project Management Branch of Operations and Maintenance Division, Alberta Environment, through its Site Development Program, is involved in improving the aesthetic appearance of provincial water management projects (see Morrison 1981). In the agricultural landscape itself the shelter belt program operated by Alberta Agriculture has a positive effect on the visual appearance of farmland (Oosterhuis 1977). Although this program has a strong functional thrust the opportunity that it provides for upgrading the quality of the environment is also recognized (H.T. Oosterhuis 1981: pers. comm.). In addition, the habitat improvement program which is carried out in connection with fish and wildlife resources frequently enhances the diversity and visual quality of the farmland. Although not all agricultural landscapes may be ascribed equal levels of aesthetic quality, there would appear to be little concern for the visual quality of the rural environment among the farming community. The visual impact of modern farming practices such as land clearing, monoculture regimes and the visual intrusion of some modern agricultural installations and buildings are rarely considered. Farmland is perceived mainly in terms of its food producing capabilities and not its amenity quality (E. Motowylo 1981: pers. comm.).

There appears to be no comprehensive program which recognizes the importance of the visual quality of the agricultural landscape. This deficiency could become significant if greater attention is going to be placed in the future on farmland as a recreation resource for both the adjacent urban populations and tourists to Alberta, as well as the quality of the environment for those who live and work in the countryside.

CONCLUSION

This overview of recreation on agricultural land in a multiple-use relationship has examined the broadest and in many ways the most complex of the interfaces between recreation and agriculture. While many of the problems identified have yet to reach significant proportions for the agricultural community there is clearly anxiety for what the future holds. This is particularly true in those areas such as the rural-urban fringe and the marginal fringe where the numbers of recreationists are most clearly evident. The disturbing aspect of this review is that most of the issues were identified by the Alberta Land Use Forum in 1976 and minimal progress has been made in many areas to put recommendations and policy into practice.

The fact that many of the problems associated with the recreational use of agricultural land result from a lack of consideration and ignorance on the part of the recreationist, points to the need for an education program which emphasizes respect for the landowner's property and which promotes an environment ethic in keeping with the use of the countryside (see Cullington 1980a). In addition, in those areas where the pressures of recreation are particularly intense greater consideration needs to be given to both land and people management. This problem is particularly acute where private farmland predominates. At the present time there is no agency in Alberta which really addresses the use of private land for recreation in a comprehensive way. Consequently, the individual farmer has little or no recourse to advice or assistance in how to deal in a positive way with recreation problems resulting from informal outdoor recreation in the countryside. In this regard, much might be learned in terms of philosophy and general methodology from England and Wales where the establishment of the Countryside Commission in 1968 provided an advisory and review body concerned with all matters relating to the conservation of, access to, and recreation in the countryside (see Butler 1979a, Getz 1975, Swinnerton 1981).

CHAPTER V

FARM-BASED RECREATION AND TOURIST ENTERPRISES

INTRODUCTION

Despite the fact that recreational use is made of both private and public agricultural land in Alberta for a variety of informal outdoor recreation activities, this pattern of multiple use tends to have a negative rather than a positive impact on farming operations. In this chapter, reference is made to the recreation-agriculture interface where there is the deliberate involvement by the landowner in the promotion and operation of farm-based recreation and tourist enterprises. The term "enterprise" is used to signify that the farmer expects to receive a cash income from the recreation opportunities he provides (see Dartington Amenity Research Trust 1974).

Although the recreational use of agricultural land has a long history, the development of recreation and tourist enterprises on farms as a positive aspect of rural planning and agricultural policy is of more recent origin. An examination of the literature shows that in those countries where farm-based recreation enterprises have been promoted by government the predominant underlying premise has been the prospect for increasing farm income. Farm-based recreation and tourist enterprises have been developed in many countries in Europe (see Dartington Amenity Research Trust 1974), Australia (Molnar 1973, 1977), the United States, and Canada. Reference is restricted in this introductory section to experiences in the United States, Britain, and Canada.

In the United States the promotion of the recreational use of agricultural land and, more specifically, farm-based recreation enterprises, dates from the early 1960s. One of the reports of the Outdoor Recreation Resources Review Commission (1962) titled *Private Outdoor Recreation Facilities* emphasized the need to stimulate the development of commercial recreation investments on private land, not least because of its strategic location in relation to centres of demand. In the same year the United States Department of Agriculture (1962) published a report on *Rural Recreation: a new family-farm business.* The foreword to this latter report noted that:

> *The development of rural recreation facilities on private land is now firmly established as a part of the Department of Agriculture's program to increase farm income and promote orderly land use adjustment in response to new forces in rural America.*
>
> *Recreation enterprises give added diversity to the farm or rural business and combine harmoniously with major agricultural use of land.*
>
> *The expansion of private outdoor recreation resources is also a logical and important part of rural area development so badly needed in many parts of the country.*
>
> (United States Department of Agriculture 1962, p. v)

Three years later (Twardzik 1965, p. 95) was able to comment that there was a "...nationwide enthusiasm for conversion of agricultural lands to recreation use." He summarized the rationale for the public policy of encouraging private recreation enterprises as: (1) to provide additional sources of income for the farmer; (2) to reduce the number of acres in agricultural production; and (3) to help meet the national demand for outdoor recreation.

In keeping with these policies numerous reports were prepared which provided guidelines for those farmers wishing to become involved in farm-based recreation enterprises (see for example Edminster 1962, Smith, Partain and Champlin 1968, United States Department of Agriculture 1963, 1964, 1965). Despite the enthusiasm for developing farm-based recreation, there were problems, including insufficient evaluation by individual entrepreneurs of the economic feasibility of recreational developments and the issue of unfair competition between private recreation enterprises and those financed entirely by public funds.

Since the 1960s relatively little research has been conducted on the recreation-agriculture interface in the United States (P.M. Howard 1981: pers. comm.), although there are exceptions (see for example Hammer 1972, Bevins and Hoffer 1981, Cordell, McLellan and Legg 1979). Moreover, although the use of farmland for certain types of recreation such as hunting, fishing, and cross-country skiing tends to make such land a critical part of the outdoor recreation estate in the United States, only a very small percentage of recreation enterprises are operated by farmers (W.F. LaPage 1981: pers. comm.).

Cordell, McLellan and Legg (1979) noted that the development of small rural enterprises (not necessarily farm-based) for recreation and tourism can downgrade rather than enhance the rural environment by reducing the visual quality of the landscape and by often providing poor service to the public. Instead they (Cordell, McLellan and Legg 1979, p. 5) argue that "only successful types of recreational enterprises, which usually require large investments, solid financial backing, and careful planning, should be encouraged as a major component of an area's development tourist resource."

The contribution that outdoor recreation enterprises can make in supplementing farm income in marginal agricultural areas has been an important dimension of the recreational use of agricultural land in Britain (see Burton 1967). Many of these marginal agricultural areas occur in the uplands and coincide with areas designated as national parks. As a result, farmers developing recreation enterprises on their property have the advantage that they are frequently situated in an attractive landscape which is recognized as a recreation and tourism destination area. Even so, Burton (1967) commented that the range of possible recreation enterprises is restricted to those which involve the operator with minimal capital expenditures, such as camping sites and farmhouse accommodation, but that when operated as supplementary enterprises to farming can provide a useful addition to farm incomes.

Dartington Amenity Research Trust (1974) estimated that between four percent and six percent of the farms in England and Wales operated recreation and tourism enterprises involving some form of tourist accommodation. However, the figure can be as high as 34 percent for farms providing tourist accommodation in established tourism destination regions (see Davies 1973). In areas which are closer to major centres of population farmers tend to concentrate on providing recreational opportunities without provision for accommodation. For example, Bull and Wibberley (1976) noted in their study of farm-based recreation enterprises in southeast England that although 9.6 percent of the farmers were involved in providing opportunities for recreation, over 75 percent of these farms did not include tourist accommodation. Attention has been drawn to the fact that the income obtained from farm-based recreation enterprises on farms located within the day recreation hinterland of major urban centres can offset some of the costs incurred from vandalism, as

well as providing a useful opportunity for educating the townsmen through farm trails, farm open days, demonstration farms, and countryside museums (Dower 1973, Phillips and Roberts 1973).

One final point that needs to be made on the basis of the British experience is that, although the operation of recreation and/or tourism enterprises can provide a useful source of income for the farmer, the entry of rural landowners into such operations needs to be approached with caution. Davies (1973, p. 31) warns that:

> *Catering for the tourist is not an undertaking which any farming family can pursue, despite their personal preparedness to do so. It is a service which calls for a real interest in people and for a great deal of understanding and tolerance. The tourist of today is no longer content to accept inferior services and facilities; he has become a far more sophisticated being, expecting to receive full value for his money and not being afraid to express himself when he does not get it.*

It is evident, therefore, that even in Britain where agricultural land is regarded as an important recreation resource, and where a high proportion of farmers in certain areas operate recreation and tourist enterprises, not every farmer could or should become involved in these types of enterprises (see Dower 1973, Keenleyside 1971).

In keeping with the situation both in the United States and Britain, the stimulus for government involvement in farm-based recreation in Canada came largely in terms of the prospect it held for increasing the farm income of the marginal farm enterprise. However, the fallacy of expecting farm-based recreation enterprises to provide a panacea to such problems was clearly recognized. For example, Baker (1966, p. 7) stated:

> *The recreation and tourist commercial enterprise cannot provide universal and automatic solution to the economic difficulties confronting the marginal farmers. Farmers who have failed to exhibit managerial skill in an agricultural enterprise can hardly be expected suddenly to display these capabilities in a recreation enterprise where the difficulties are, perhaps, even greater. A commercial recreational enterprise is not a safe refuge for the rejects of agriculture.*

Nevertheless, government interest and involvement in farm-based recreation has continued to reflect the income-generating aspects of these enterprises, rather than the role that farmland can play in the total outdoor recreation open space system (see for example, Alberta Tourism and Small Business 1980, Canadian Council on Rural Development 1975a, 1975b, Graham 1975, McCracken 1972).

Definitions

Prior to examining in more detail the nature of farm-based recreation and tourist enterprises, the terms "recreation" and "tourism" should be clarified. The guidelines adopted are those used by the Dartington Amenity Research Trust (1974, p. 4-5) in its study of *Farm Recreation and Tourism:*

> *...recreation and tourism are two distinct though closely related activities or users of land. 'Recreation' is taken to cover the leisure activity of the residents within, and of day visitors to any area; 'tourism' involves travelling away from home for one or more nights. While on his travels the tourist may well use exactly the same recreation facilities as the man who is out from home for the day.*

A key concept associated with farm-based recreation and tourism enterprises in Alberta is the "country vacation." Alberta Tourism and Small Business (1980a, p. 1) provides the following definition:

> *A country vacation is simply a vacation or holiday in which a vacationer occupies a large portion of his time engaged in recreational activities on a farm, ranch or country home and its environs. It is also a commercial venture for a country vacation host who opens his home and/or property to paying guests so that they may enjoy recreational activities in a predominantly rural environment.*

The distinction which exists between farms and ranches that offer country vacations requires elaboration. Klippenstein (1973) in his study of recreational enterprises for farmers in Alberta resorted to the guidelines provided by Smith, Partain and Champlin (1968, pp. 21-22). They differentiate between the two types of enterprise as follows:

> *A vacation farm is a privately owned farm which provides guests sleeping and eating accommodations as well as vacation activities. Vacation farms differ from vacation and dude ranches in that ranches usually emphasize a western atmosphere with cowboy living accommodations and activities centering around the use of horses.*
>
> *Some vacation ranches are actual "working" ranches with extra rooms for rent. Some vacation farms are commercial farms with extra rooms. However, a vacation farm may emphasize the use of horses, and a dude ranch may offer recreation activities not associated with horses.*

The difficulty of finding a satisfactory solution to this problem of distinguishing between a farm and a ranch has led Travel Alberta (1980a, p. 57) to suggest "...there is no clear cut answer. It's all in the mind of the rancher or farmer, as the case may be." Nevertheless, it is apparent that a variety of types of recreation enterprises do take place on farms and/or ranches and these will be examined in the next section.

TYPES OF FARM-BASED RECREATION AND TOURISM ENTERPRISES

Virtually any kind of recreation or tourist activity that is associated with the out of doors can take place on farms and/or ranches (Dartington Amenity Research Trust 1974, United States Department of Agriculture 1962). For example, the United States Department of Agriculture (1962) grouped the various kinds of recreation enterprises suitable for development on farms and ranches into seven categories: (1) vacation farms; (2) picnicking and sports areas - swimming, boating, fishing, baseball, archery, horseback riding, shooting, tennis, golf, winter sports; (3) fishing waters; (4) camping, scenery, and nature recreation areas; (5) hunting areas; (6) hunting preserves; and (7) selling recreation land or recreation use rights.

Dumoulin, Naud and Ritchie (1977) in a study involving a conceptual framework for the development of "agro-leisure" as a means of improving the socio-economic well being of farmers in rural Quebec suggested the following categories of potential activities: (1) agricultural farms - community farms, community livestock; (2) accommodation farms - youth camps, family camps, camping, cottages, farm residences; (3) restaurant farms; (4) service farms - commercial markets, small animal lodging; (5) socio-cultural farms - interpretive, historic farms, woodworking shops; (6) sporting activity farms - riding, hunting, marina, fishing, archery, bathing; and (7) forestry farms - nature trails, photography.

Dartington Amenity Research Trust (1974, p. 15) in its study of recreation enterprises on farms in Britain suggested that the main types of enterprise fall within three broad categories: (1) tourist accommodation - farmhouse accommodation, self-catering accommodation, second homes, camping and caravan sites, specialized holidays; (2) resource-based activity - riding and pony trekking, fishing, boating, other water sports, shooting; and (3) day-visitor enterprises - informal recreation, special attractions, farm catering and farm produce, indoor activities and events, one-day or occasional events, educational visits. The categories are not mutually exclusive in that day-visitor enterprises and resource-based activities frequently occur in connection with tourist accommodation on farms or ranches. However, the distinction between those units oriented predominantly towards accommodation as opposed to day-visitor (or non-residential) operations is an important consideration when evaluating farm-based recreation and tourist enterprises.

Non-Residential Farm-Based Recreation Enterprises

The potential for non-residential farm-based recreation enterprises is probably greatest for those farms or ranches within the day recreation hinterland of major urban centres. Both Ironside (1971) and Molnar (1977) suggest that the location of non-residential operations within approximately 50 miles of a city is a requirement for day trips. An alternative location where non-residential enterprises could be successful is in established tourism destination areas where day-visitor enterprises can attract tourists vacationing in the area. Unfortunately, the non-residential category of farm-based recreation enterprises has received little attention in the Canadian literature. Consequently, any observations that are made about this type of operation have to be of a general nature.

Ironside (1971) noted that recreational enterprises other than vacation farms included riding stables (see also Irving 1969), hunting and fishing operations, and shooting preserves. Dartington Amenity Research Trust (1974) in its examination of day-visitor enterprises recognized that although a number of resource-based activities such as riding, fishing, swimming, and boating are frequently associated with this type of operation, there are certain enterprises which distinctly fall within the day-visitor category. One major enterprise type is farm catering and the sale of farm produce. The development of farm catering facilities, such as farmhouse restaurants which could utilize farm grown produce at farm shops and at the farm gate or the opportunity for the public to pick their own fruit and vegetables, offers an alternative source of income for the farmer. The sale of farm produce such as fruit and vegetables is obviously largely determined by the type of agriculture occurring in an area and is particularly associated with the fruit growing or intensive vegetable production areas of British Columbia, for example. In Alberta, the sale of farm produce

and pick your own fruit and vegetable enterprises do occur (A.D. MacKenzie 1981: pers. comm.) and the more than 65 "Farmers' Markets" across the province testify to the attraction of home-grown produce (Travel Alberta n.d.). However, there are no figures available to indicate how important the pick-your-own and farm sales enterprises are to the individual farmer.

Another major category of day-visitor enterprises is educational visits. Dartington Amenity Research Trust (1974, p. 16) states that many people believe "...that one solution to the rural conflict is to bring together the farmers and the urban public so that they can exchange ideas and learn about each other's problems." This objective can be achieved through a variety of programs directed to different age groups. The role of farm trails, farm open days and farm museums has already been referred to in this connection. A particular facet of educational visits is the organized visit by school groups which occurs in cooperation with a number of farms and ranches in Alberta (R. Houser 1981: pers. comm., A. Young 1981: pers. comm.) and which is an important aspect of farm-based recreation in Manitoba (M. Manning 1981: pers. comm.).

One of the most comprehensive studies to examine farm-based recreation in Alberta was undertaken by Klippenstein (1973) (see also Klippenstein and Ironside 1973). Part of the study involved the analysis of the response of 202 Alberta farmers to a postal questionnaire. On the basis of his analysis, Klippenstein (1973) suggested that approximately 40 percent of Alberta farmers are interested in developing recreation enterprises. "Interest was highest in snowmobiling (26 percent), with camping (23 percent), horseback riding (21 percent), guest accommodation (20 percent), and hunting (15 percent), in order of importance." (Klippenstein and Ironside 1973, p. 24). To what extent the interest in snowmobiling, horseback riding, and hunting coincided with respondents indicating an interest in farm accommodation is impossible to determine from Klippenstein's (1973) analysis.

The paucity of reliable information on the types of activities that take place in conjunction with non-residential farm-based recreation enterprises has permitted only a superficial review of this facet of farm-based recreation in Alberta. There is more information available on the types of outdoor recreation activities that take place on vacation farms or ranches. However, although many of these activities could take place as day-visitor enterprises any attempt to apply these findings to the non-residential category farm or ranch enterprise would be little more than speculation.

Vacation Farms and Ranches

Central to the concept of vacation farms and ranches is the provision of some form of accommodation, directly or indirectly for the tourist. Travel Alberta (1980a) in its *1981 Visitors Accommodation Guide* classifies country vacations into seven categories: (1) guest ranches; (2) working farm/ranch vacations; (3) hobby farms; (4) vacation farms; (5) camping on a farm; (6) country homes; and (7) wilderness retreat. The guide indicates that there are four guest ranches, seven working vacations, four working farm vacations, two hobby farm vacations, two vacation farms, three camping on a farm operations, two country homes and one wilderness retreat. Travel Alberta (n.d.) in its promotional brochure *Country Vacations in Alberta* provides a description of most of the categories.

Working Farms/Ranches: Ranches can be very large operations engaged primarily in raising cattle, or comparatively small and without cattle. Farms can be big grain growing operations or modest mixed farming and dairy operations. Accommodations and amenities provided for guests can also vary widely, from rustic to modern, rugged to very comfortable.

Hobby Farms/Vacation Farms: A less sustained pace of activity. Usually smaller farms, mostly with horses and some cattle.

Camping Accommodation: Operator provides the facilities of a conventional trailer/tent campground, but you participate in farm life in some instances, take your meals with the farm family.

Country Homes: Large, fully modern homes located in country surroundings. Some offer a get-away-from-it-all environment and lots of relaxation. Others, a considerable range of activities.

Wilderness Retreats: Strictly "back to nature" for a secluded rural vacation.

Apparently some confusion arises over allocating an individual operation to a specific category, and as a result the only distinction that will be made in future is between farm vacations and ranch vacations (L. Dowling 1981: pers. comm.).

Present Supply of Farm and Ranch Vacations

It is virtually impossible to estimate the present supply of farm and ranch vacation operations in Alberta. There is no single source which lists these enterprises and the confusion in terminology is another problem. On the basis of the information that is available, Cox (1981b) has been able to identify 36 separate country vacation operations (the term "country vacations" being used in a general sense to include all known farm or ranch enterprises involving provision for accommodation). There appear to be 25 separate country vacations listed in publications produced by Travel Alberta (1980a, 1980, n.d.). Added to this number are six additional country bed and breakfast establishments listed by J. Thompson (1981). Finally a further five country vacation operations are identified in the *West Central Alberta Tourism Destination Area Study* (InnTrec Group Ltd. 1981). The figure of 36 country vacation operations almost certainly underestimates the number that exist. There are probably a number of operations which did not pass Travel Alberta's inspection (see Alberta Country Vacation Association and Travel Alberta 1976) and were therefore excluded from the register, as well as those operations which have not contacted Travel Alberta for inspection (Alberta Tourism and Small Business 1980). As a basis of comparison, the *1981 Manitoba Farm Vacations Association* guide (Manitoba Farm Vacations Association n.d.) lists 53 host farms. Manning (1981: pers. comm.) indicated that there are 57 host farms in Manitoba and that the number of farms involved has remained relatively stable in recent years.

COUNTRY VACATIONS

Following the procedure adopted by Travel Alberta, the term "country vacations" will be used to encompass the different types of farm-based recreation or tourist enterprises involving accommodation unless specified otherwise. The remainder of this chapter examines country vacations from a number of perspectives (1) the attraction of country vacations and patterns of consumption; (2) the provision of country vacation operations and the involvement of the farmer and his family; (3) organizations associated with the promotion and operation of country vacations in Alberta; and (4) country vacations and tourism destination areas.

The Attraction of Country Vacations and Patterns of Consumption

Reference has already been made in this report (see Chapter II) to the attraction of rural recreation involving the natural and historic setting, participation in outdoor activities, and the opportunity to interact with local people and their distinctive lifestyle (see Vogeler 1977). In this regard, Vogeler (1977, p. 299) notes that:

> *...a satisfying rural vacation experience is not defined by participation in specific activities, but rather by a holistic encounter with the lifestyles of rural Americans. The interpersonal experience between rural and vacation families were the most satisfying and served best to sustain common beliefs about agrarian values.*

In addition, the attractiveness of farm or ranch vacations to the public is related to the aesthetic and recreation potential of the region in which the farm or ranch vacations are located (Vogeler 1977, p. 296):

> *Theoretically the supply of vacation farms and dude ranches could be created wherever farms and ranches occur, but their attractiveness to urbanites is determined by their location in recognized national and regional recreation areas. Most rural vacationers sought a farm or ranch experience in an uncommon scenic setting rather than rural vacations alone.*

Vogeler (1977, p. 298) also looked at the specific reasons or motivations for people taking farm or ranch vacations, and suggested that "while ranch vacationers were concerned more with the general aspects of 'peace and quiet' and a new experience, farm vacationers were looking specifically for new experiences for their children, an inexpensive vacation and enjoyment of farm activities." Two other findings that Vogeler's study emphasizes is the importance of children in influencing the decision of a family to take a farm or ranch vacation, and, the attraction of peace and quiet as part of the country vacation setting.

Scott (1979) as a result of an examination of farm vacations in Ontario found that the most important considerations in taking a farm vacation were in order of importance: (1) friendly and down-to-earth hosts; (2) fresh air; (3) quiet relaxed atmosphere; (4) healthy outdoor activities; and (5) a contrast and relief from busy, noisy tensions of urban life.

In reviewing existing studies it would appear that the following motivations are prevalent in people taking farm and ranch vacations: (1) the desire for peace and quiet and a relaxed

atmosphere; (2) the desire for a change of pace through the contrast and relief from urban pressures; (3) the opportunity to participate in ranch or farm life and outdoor and farm activities and the new experiences that derive from the involvement; (4) nostalgia resulting from a rural or farm upbringing; (5) the opportunity to provide children with a farm or ranch experience; (6) the opportunity to interact and gain meaningful interpersonal experiences with hospitable rural people; and (7) the attraction of an inexpensive vacation.

Two aspects of Vogeler's (1977) study of farm and ranch vacationing in the United States are particularly relevant to the Alberta situation. First, the glamour and appeal of the western cowboy way of life, and second, the fact that country vacationers are attracted to nationally and regionally known recreation areas of high scenic value. Both of these findings would appear to have special significance for the potential expansion of the ranch vacation industry along the foothills and eastern slopes of the Rocky Mountains in Alberta.

Country Vacations: The Clientele and Patterns of Consumption

Unfortunately, the reluctance of the Tourism Division of Alberta Tourism and Small Business to release any of the information they have derived from surveys of the country vacation program severely restricts the level of analysis that can be pursued in this section. Nevertheless, a number of observations can be made on the basis of studies undertaken elsewhere in Canada and the United States and the limited amount of information available on the situation in Alberta.

The Clientele

Because of the attraction of country vacations in providing a contrast both in terms of lifestyle and environment to the urban setting, it is not surprising to find that a high proportion of the clientele that patronize country vacations is from urban areas and, particularly, the larger cities (see Braithwaite and Wright 1972, Scott 1979, Vogeler 1977). Support for this finding is afforded by Berkan (1981: pers. comm.) who suggests that the relatively low level of interest by Albertans in farm vacations is a reflection of the predominantly rural character of the province and the fact that people are not far enough removed from the land to want to return to it for their vacation. A further dimension concerning the origin of country vacation guests is the disproportionately high numbers of foreign visitors. This phenomenon is particularly true for guest ranches (S. Cowley 1981: pers. comm., InnTrec Group Ltd. 1981). The attraction of country vacation accommodation for many of these visitors is the opportunity to meet Canadians and to acquire an intimate association with the countryside (Alberta Country Vacation Association and Travel Alberta 1978). In the case of Europeans, previous familiarity with the bed and breakfast concept is also an important factor (A. Young 1981: pers. comm.).

Existing studies indicate that a large proportion of the guests at country vacation establishments have undertaken post-secondary school education and occupy professional and managerial positions. They also tend to have larger incomes and longer paid vacations (see Braithwaite and Wright 1972, Scott 1979, Vogeler 1977). With reference to the age and group composition of farm or ranch guests it is apparent that "children play an essential role in farm and ranch vacation selection" (Vogeler 1977, p. 298). Consequently, there is a tendency for persons in the younger middle age range to choose country vacations for the

sake of their children. Syrnyk (1981: pers. comm.) has indicated that in the case of Alberta, families with children comprise a significant proportion of farm vacation guests. Nevertheless, in terms of numbers, children probably account for the largest number of visitors if school trips to country vacation operations are taken into account. For example, Young (1981: pers. comm.) indicated that three vacation farm operations offering farm tours for school groups handled 3,000 school children in a two month period.

Country Vacations: Visitor Patterns

There is also a general consensus on the patterns of use of country vacations in terms of length of stay, seasonal occupancy, and repeat visits. Scott's (1979) study in Ontario indicated that a majority of farm vacationers had a length of stay of between four and seven days, whereas Manning (1981: pers. comm.) noted that the average length of stay at host farms in Manitoba is 4.6 nights.

With regard to seasonal patterns of use of country vacations, there is a distinct summer peaking with July and August being the busiest months (D.O. Syrnyk 1981: pers. comm., M. Manning 1981: pers. comm.). During the fall, winter and spring, farm vacationers usually come for weekend visits (Scott 1979). For those country vacation enterprises which provide opportunities for cross-country skiing, snowmobiling and other winter activities, the Christmas period experiences increased levels of patronage. (S. Cowley 1981: pers. comm.).

Both Scott (1979) and Vogeler (1979) noted that a high proportion of people (81 percent and 96 percent respectively) were willing to return to the same ranch or farm for a country vacation in the future. These figures would seem to reflect a high degree of satisfaction with the country vacation experience.

In the absence of relevant data it is impossible to provide an accurate assessment of visitor trends to vacation farms and ranches. However, Young (1981: pers. comm.) and G. Taylor (1981: pers. comm.) are of the opinion that the numbers of visitors to country vacation enterprises have been increasing over the past few years. They contend that the advertising and promotion undertaken by Travel Alberta has been an important factor, although G. Taylor (1981: pers. comm.) suggests that personal recommendation among friends and relatives is probably the most important factor in building up an established clientele. In addition, both Young (1981: pers. comm.) and G. Taylor (1981: pers. comm.) are optimistic that visitation and demand for all types of country vacations will increase over the next few years (see also Bye 1981).

There is also a dearth of visitor-trend statistics on guest ranches. Although there are large seasonal variations in the levels of occupancy for guest ranches (see InnTrec Group Ltd. 1981), Cowley (1981: pers. comm.) suggests that visitor trends are definitely on the increase for the guest ranch industry. Warren (1981: pers. comm.) supports this view and notes that there seems to be far more demand for guest ranch type vacations than the other categories of country vacations.

Activities and Patterns of Participation

Alberta Tourism and Small Business (1980, pp. 11-12) provides an indication of the various activities offered by country vacation hosts in the province:

> *Horseback/trail riding are the single most important activities in most of Alberta's country vacation places. Walking, hiking and sightseeing are the next most popular activities mentioned by vacation hosts, while water-based activities such as fishing, swimming, boating and canoeing are also very popular, and many farms/ranches provide facilities (swimming pools, boats, canoes, etc.) to accommodate them. Participation in actual farm/ranch activity is also very popular. Many operators, moreover, encourage winter activities, especially cross-country skiing. In addition, a couple of locations emphasize handicrafts such as weaving and spinning. A majority supply games and books to vacationers while several properties have a golf course nearby for interested guests to use.*
>
> *Several properties provide riding instructions and guides. Others ...provide professional instructions in arts and crafts — including pottery and weaving. Some offer interesting outdoor oriented educational programs such as orienteering, wilderness survival and nature observation.*
>
> *Whenever possible, all country vacation hosts encourage their guests to participate in farm/ranch activities and to visit neighboring farms and ranches and other points of interest. Some of the activities offered are: taking part in local rodeos, gymkhanas and horse shows; visiting Hutterite colonies, museums, old/historic buildings, fish rearing stations, parks, etc. Campfires, wiener roasts, sing-songs and dancing have also proved to be popular with several hosts and their guests.*

The results from other studies (Braithwaite and Wright 1972, Scott 1979, Vogeler 1977) are not unlike the range of activities identified by Alberta Tourism and Small Business. For example, both Braithwaite and Wright (1972) and Scott (1979) found that helping with farm chores, walking, sunbathing, and relaxing and riding were the most popular activities.

Vogeler's (1972) study in particular highlights a number of aspects of levels and types of participation in activities associated with country vacationers. First, only about half of the guests or visitors actually participated in activities on the farm, and most of those were children. Second, less than half of the farm and ranch vacationers chose to participate in activities off the farm or ranch (see also Scott 1979). Third, there is a difference in the types of activities participated in by farm vacationers as opposed to ranch vacationers. In this regard Vogeler (1977, p. 299) states:

> *Larger numbers of farm vacationers enjoyed farm chores, hay rides, and indoor and outdoor games than ranch vacationers who participated more in horseback riding, cookouts and fishing. The contrast between ranch and farm vacationers is further accentuated by their off-farm and off-ranch activities. Ranch vacationers did more mountain-stream fishing, horseback riding, and golfing than farm vacationers.*

Finally, Vogeler (1972) emphasizes the fact that people do not go on country vacations specifically to participate in activities. "Mostly vacationers enjoyed peace and quiet and privacy by relaxing on private property which guarantees these conditions." (Vogeler 1972, p. 299).

An important consideration is, however, the level of applicability of these findings to country vacations in Alberta. Nevertheless, the implications for the provision and programming of activities on and off the farm or ranch is clearly evident.

The Provision of Country Vacation Operations and Factors Influencing Their Development

Reference has already been made in this chapter to the different categories of farm and ranch vacations that are identified by Travel Alberta under the general term "country vacations." In addition, it was noted that there would appear to be 36 different operations in Alberta providing opportunities for country vacations on the basis of relevant brochures and related information. However, it was recognized that this figure probably underestimated the number of enterprises that actually exist.

Services Provided

Although a brief description of the categories has been given, reference needs to be made to some of the services and facilities that are provided. Seven operations offer accommodation for unaccompanied children as well as for children as part of a family group. One operation is exclusively a children's camp during July and August, and three operations welcome school tours. In addition to the three operations listed in the camping accommodation category, eight operations also offer winter accommodation and opportunities for skiing or snowmobiling.

The guest ranch category is rather unique. Travel Alberta has identified four of these operations in the province and they tend to be larger, exclusively commercial operations which offer accommodations and a variety of dude ranch type activities such as trail rides, hay rides, barbecues, hiking, fishing, swimming, and planned social events. Accommodation ranges from 20 persons in the smallest operation to 60 persons in the largest (R. Benfield 1981: pers. comm., Travel Alberta 1980b).

Geographical Distribution of Vacation Farm and Ranch Operations

Reference to the *Country Vacations in Alberta* brochure (Travel Alberta n.d.), shows a distinct pattern in the distribution of vacation farm and ranch operations in the province. Not surprisingly, most of the working ranch vacations are located in the cattle and livestock raising areas within or adjacent to the foothills of the Rocky Mountains. In contrast, the farm vacation enterprises are found predominantly within the central part of the province and particularly along the eastern edge of the Edmonton-Calgary corridor. The guest ranches, as would be expected, are therefore able to take advantage of the interface between the agricultural lands and the forested areas of the Green Area, as well as the proximity to the Rocky Mountains and the national parks.

Factors Affecting the Development of Country Vacation Enterprises

A variety of factors influence the development and subsequent operation of vacation farms and ranches. The United States Department of Agriculture (1962, p. 21) suggested that the following factors "... need to be taken into consideration by landowners who are contemplating getting into the recreation business": (1) the human factor – individual interest and community attitudes; (2) type of farm; (3) proximity to population centres, transportation and utilities; (4) present extent and distribution of recreation facilities; (5) location and character of resources associated with recreation; (6) laws and administrative regulations; and (7) agencies and organizations available to help (see also Dartington Amenity Research Trust 1974, Alberta Country Vacation Association and Travel Alberta 1978). An examination of all these factors is beyond the scope of this study. As a result, attention is largely restricted to the motives of farmers or ranchers for developing a recreation enterprise, whereas a subsequent section of this chapter outlines the agencies and organizations involved with country vacations in Alberta.

Motives for Developing Country Vacation Enterprises

In examining the motives for developing farm-based recreation or tourist enterprises, the fact that government motives and those of the individual farmer do not necessarily coincide must be recognized. It has already been noted that the increased economic viability of the marginal farm as an aspect of rural development was the main impetus behind the government promotion of farm-based recreation and tourism in the 1960s. More recently, greater recognition has been given to the positive role that farms and ranches can play in diversifying the opportunities for recreation and tourism in rural areas. The evaluation of potential new tourism destination areas in the province (see Bloomfield and Hoole 1981) is indicative of this trend, and a number of the regional studies have made specific reference to country vacations on farms and ranches.

Notwithstanding government policy, the success or failure of country vacations on farms or ranches is largely determined by the individual farmer and his family. In this regard an appreciation of the motives lying behind a farmer's decision to provide opportunities for country vacations is of paramount importance. Dartington Amenity Research Trust (1974, p. 23) refers to it in the following way:

> *The motive of the farmer in developing a recreation enterprise is of first importance, since it will affect the financial return he expects, the rigour with which he approaches such factors as location or the call upon land and labour, and the way in which he creates and manages the enterprise.*

Klippenstein's (1973) study indicated that the reasons for Alberta farmers being interested in recreational enterprises on their farms were, in decreasing order of importance: income, interest in meeting guests, and the need for more recreational facilities. Braithwaite and Wright (1972, p. 53), with reference to farmers in Ontario, reported that "ninety percent of the farm vacation hosts, when asked for reasons they entered the farm vacation business, stated 'we like to meet people', 'we needed the money' and 'we had the facilities.' " G. Taylor (1981: pers. comm.) and A. Young (1981: pers. comm.), with reference to members of the Alberta Country Vacation Association, support these findings but add the important motive

of providing the opportunity for urban people to interact with rural people and learn about the farm way of life. Essentially this motive would appear to be an altruistic concern of improving communications and attitudes between urban and rural people.

Although individual country vacation hosts attach different levels of priority to the motives noted, there is clearly a continuum between those hosts who regard farm-based recreation and tourist enterprises as supplementary to the operation of the farm or ranch, and those for whom the "...recreation enterprise is a business in its own right, and their success is measured in terms of net income or return on capital invested." (Dartington Amenity Research Trust 1974, p. 23). This latter position is more representative of the attitudes of guest ranch operators (S. Cowley 1981: pers. comm.). However, Young (1981: pers. comm.) believes that most country vacation enterprises, with the exception of guest ranches, have farming or ranching as a main income generating activity. In most instances, therefore, the questions posed by the Alberta Country Vacation Association and Travel Alberta (1978, p. 5) in its handbook for prospective country vacation hosts are all the more relevant: (1) do you enjoy having guests on the farm? (2) can your whole family enter enthusiastically into hosting? and (3) is extra income important, but not the only reason for becoming a host?

Klippenstein's (1973) study appears to be the only Alberta research that has examined the relationship between the level of interest expressed by farmers and ranchers in becoming country vacation hosts and characteristics of the farm enterprise (see also Klippenstein and Ironside 1973). The relevant findings, even though not statistically significant, are as follows:

1. There was a positive relationship between the amount of forested land on a farm holding and the level of interest in establishing a recreation enterprise.

2. There was an inverse relationship between the amount of cultivated land and the level of interest in recreation.

3. There was more interest shown in recreation by those operators with livestock and mixed farms than those with grain farms and miscellaneous farms.

4. For the most part, the operators of large farms were more interested in developing farm-based recreation and tourist enterprises than their counterparts on smaller units.

5. Farmers were generally less interested in developing recreation and tourist enterprises if they were located away from paved roads and if they were within a fifty mile radius of metropolitan centres.

6. There was no statistically significant variation on a regional basis between farmers in terms of their level of interest in developing recreation and tourism enterprises. However, interest in providing facilities for camping and vacationing was lowest in the southern part of the province, whereas interest in developing horseback riding enterprises was lowest in most urbanized areas.

7. There was a greater likelihood of a farmer being interested in developing a recreation enterprise on a commercial basis if the activity was already taking place on his property.

Reasons for Lack of Interest in Developing Recreation or Tourism Enterprises

Klippenstein (1973) also explored the reasons why farmers were not interested in developing recreation or tourism enterprises. The reasons given included: (1) did not want to bother with management problems; (2) concern about existing and potential conflicts with agricultural activities; (3) lack of recreation resources on the farm; (4) lack of time; (5) preference for privacy and quiet; (6) a desire to stick strictly to farming; and (7) apprehension toward trespassers and city people on the farm. Bearing in mind the significance attached to recreation and tourism enterprises for the marginal farmer, Klippenstein and Ironside (1973, p. 32) make a perceptive observation:

> *A main emphasis in studies of farm-based recreational enterprises is that they could help solve the problems of low farm incomes. But the finding that interest is higher among operators of large farms, coupled with a suggested association of large farm size and higher incomes, suggests that the farmer who is in need of increased income is less disposed to interest in alternative sources of income.*

Issues Associated with the Development of Country Vacation Enterprises

Even if a farmer or rancher is disposed towards the establishment of farm- or ranch-based recreation and tourism enterprises, there are a number of issues that have to be borne in mind. First, although initial capital costs in establishing an operation vary depending on the type of enterprise being considered, they tend to be relatively low because of the utilization of surplus forms of accommodation and other resources (L. Dowling 1981: pers. comm., Braithwaite and Wright 1972). This type of situation would apply to those enterprises which are supplemental to the farm or ranch. However, the meeting of capital costs involved in establishing a full-time operation, such as a guest ranch, is considerably more difficult in the current economic climate (S. Cowley 1981: pers. comm.). Cowley (1981: pers. comm.) notes that initial capital investment is hindered by the reluctance of financial institutions to lend money or provide mortgages. In addition, there is a general lack of any form of government incentives or assistance programs for guest ranch operations in Alberta (S. Cowley 1981: pers. comm.). It is estimated, for example, that the capital costs involved in developing a guest ranch similar to those already in existence in the province would be between $3.3 million and $3.7 million (InnTrec Group Ltd. 1981).

A second issue that faces the operator of a country vacation enterprise that is supplemental to farming is the need to keep the operation within the operating capabilities of the host family and to use the labour provided by the farm family, as well as existing farm facilities. Young (1981: pers. comm.) and G. Taylor (1981: pers. comm.) suggest that in these circumstances farm-based recreation and tourism enterprises can provide a moderate to good rate of return. The problem arises when the farmer goes beyond these resources and widens the scope of the operation, incurring both additional capital and operating costs. The hiring of additional staff is seen as a particular problem in this regard (A. Young 1981: pers. comm.).

Related to the previous problem is the need to ensure that expansion of the farm vacation enterprise does not interfere with the main farm operation. Particularly significant in this regard is the fact that in addition to the difficulties of the seasonality of tourism, the peak demand for farm vacations occurs during the summer months coinciding with the busiest period for many farmers (see Dumoulin, Naud and Ritchie 1977). Expansion can also put extra strain on farm family life and the financial and managerial capability of the farmer and his wife.

A final issue which is particularly relevant to the guest ranch operation is the potential conflict between the private developer and the public sector. Cowley (1981: pers. comm.) feels, for example, that there could be greater cooperation between these two groups than is currently the case. In particular, he is of the opinion that guest ranches could be integrated into the development of recreation countries such as Kananaskis Country.

Organizations and Agencies Involved with Country Vacations

Comprehensive overviews of federal and provincial programs affecting the development of recreation and tourism in rural areas have been prepared by Balmer, Crapo and Associates, Inc. (1975) and Graham (1975). Consequently, attention in this section is restricted to the role and function of the Alberta Country Vacation Association, the Alberta Guest Ranch Association and certain aspects of government involvement.

Alberta Country Vacations Association

The principal association involved in the promotion and development of the farm and ranch vacation industry in Alberta is the Alberta Country Vacation Association. Established in 1971, it was initially called the Great West Farm Vacation Association. During the early 1970s there were approximately 45 members (Klippenstein 1973, McCracken 1972), whereas at the present time there are 13 members in the Association. In order to become a member of the Association, the prospective country vacation host must go through a three-step process consisting of a health inspection, standards inspection and a Travel Alberta Product Testing. These requirements have to be met by any country vacation host wishing to be listed in Travel Alberta publications.

The aims and objectives of the Association are as fo! ws: (1) to develop and promote a characteristic farm/ranch vacation within the province of Alberta which will be of economic value to the farmer or rancher and provide a recreational and cultural fulfillment for the residents and visitors alike; (2) to bring about improved rural-urban understanding; (3) to improve the standards of the facilities and services provided for country vacations; and (4) to assist its members in the cooperative advertising of accommodation and provide administrative support (G. Taylor 1981: pers. comm.). Other roles include liaison with Travel Alberta and active membership in the Canadian Country Vacations Association.

A number of major issues currently face the Association. First is whether or not the Association could be more effectively run by a paid coordinator who would undertake administrative and promotional duties that are presently being undertaken by volunteers or by Travel Alberta. In this regard Young (1981: pers. comm.) contends that the Manitoba Farm Vacations Association provides an appropriate model. A second issue, according to Young

(1981: pers. comm.), is that there are not enough vacation hosts to accommodate the demand. In this regard, Young (1981: pers. comm.) feels that higher priority should be given to increasing membership in the Association rather than promoting demand through advertising. The third issue concerns the degree of involvement of Alberta Agriculture in the country vacation program. Although the country vacation program was initially associated with Alberta Agriculture, it was subsequently transferred to Alberta Tourism and Small Business in 1976/77. There is a feeling that Alberta Agriculture should continue to have greater involvement with the program, and that Alberta Agriculture and Alberta Tourism and Small Business should work together in the area of country vacations (G. Taylor 1981: pers. comm.). Experience in Britain (Dartington Amenity Research Trust 1974) and the United States (United States Department of Agriculture 1962) illustrates the high level of involvement by agricultural agencies in farm-based recreation and tourism.

Alberta Guest Ranch Association

The Alberta Guest Ranch Association is a society incorporated under the Societies Act and as such acts as an advocate of the guest ranch industry. The Association currently represents four guest ranches in Alberta which are full-time commercial enterprises, and is affiliated with the Western Canada Guest Ranch Association. At present the Association receives no financial funding from the provincial government. However, substantial promotional and advertising assistance is provided by Travel Alberta.

Although the Association recognizes the beneficial promotional efforts of Travel Alberta, other government agencies are not responding in the same positive manner and, in fact, have policies which tend to be detrimental to the industry (S. Cowley 1981: pers. comm.). Problems include "...poor signage on the highway systems in proximity to the ranches; lack of low-interest Government funding; detrimental legislation which is more applicable to city hotels than isolated ranches; and poor, usually negative, communication with Government" (M.T.B. Consultants Limited 1980, p. 63).

Government Involvement

The primary provincial government department involved in the country vacation industry is Travel Alberta. Although Alberta Tourism and Small Business (1980) has produced a document entitled *Country Vacations in Alberta,* its content regarding policy and strategy remains confidential. With regard to the current situation, the document *Alberta Country Vacations: Information and Reference Handbook* (Alberta Country Vacation Association and Travel Alberta 1978) provides an indication of government involvement. In this regard there are three major areas where assistance is provided: development, marketing, and financial. Agencies mentioned include Travel Alberta, Alberta Agriculture, Alberta Recreation, Parks and Wildlife (now Recreation and Parks), the Federal Business Development Bank, and Alberta Tourism and Small Business.

Country Vacation Enterprises and Travel Alberta's Destination Area Planning Program

Travel Alberta has recently become involved in a comprehensive planning approach to tourism development in the province. This approach is referred to as the "destination

area planning process." It was initially formulated "...to develop and promote other areas of the province as alternative destinations to Banff and Jasper" (Bloomfield and Hoole 1981, p. 11). Five areas of the province have been selected for incorporation in this planning process and the first phase of the process consisting of an inventory and assessment of tourism resources, facilities, and attractions (Bloomfield and Hoole 1981) has been prepared by consultants. The five areas initially selected are Southeastern Alberta (IBI Group 1979), Southwestern Alberta (M.T.B. Consultants Limited 1980), Grand Cache and area (M.T.B. Consultants Limited 1979), Grand Centre/Bonnyville (Marshall, Macklin and Monaghan 1979), and West Central Alberta (InnTrec Group Ltd. 1981).

Excluding the Grand Cache report which is concerned with part of the Green Area and therefore not part of the agricultural area of the province, the remaining four reports suggest that there is room for the development of one 4-season guest ranch within each region. These range from a combined water-based/dude ranch resort in the Grande Centre/Bonnyville and West Central regions to more modestly sized guest ranch proposals in the Southwest, Southeast and West Central Regions. Little mention is made, however, of the other forms of country vacation enterprises. However, the InnTrec Group Ltd. (1981) in its study of West Central Alberta considers that the country vacation industry has a high potential for growth due to the increased demand for education and experimental types of vacations.

Impact of Tourism in Rural Areas

The impact of tourism in rural areas received considerable attention by the Canadian Council on Rural Development (1975a, 1975b) during the mid-1970s (see also Guertin 1975, Chow 1980, Pigram 1980). To a certain extent the types of impacts, whether environmental, social or economic, are not markedly different from those generated by outdoor recreation, since other than for the accommodation dimension, the types of activity are remarkably similar.

A fundamental difference is that the provision of accommodation provides the opportunity for the country vacation host to receive income from a variety of activities, many of which would not generate income if provided on an individual or informal basis. There is also the important consideration that income generating activities can be used to support programs and facilities that would not normally be charged for, such as the provision of open space for informal activities or nature trails. However, there is greater contact between the tourist and the farmer or rancher and his land because of the longer period spent in a particular location. These patterns of activity place additional demands upon resources in terms of space and services (see Butler 1981).

In the absence of specific data for Alberta, reference to some of the conclusions reached by the Canadian Council on Rural Development (1975) provides an indication of the impact and issues associated with the promotion of tourism in rural areas. Bearing in mind the limited involvement of Alberta's farmers and ranchers in establishing recreation and/or tourism enterprises to date, the quotations provide useful insights for the future.

> *The multiplier effects of tourism investments are considered to be quite low. The apparently evident benefits in rural areas are in reality marginal and supplementary to existing economic activities.* (Canadian Council on Rural Development 1975b, p. 15).

The development of tourism and recreation in rural areas should be on a scale appropriate to the rural setting and absorptive capacity of the existing resource base; it should be in harmony with the local environment and lifestyle; and it should permit a high degree of integration of tourists and local communities. (Canadian Council on Rural Development 1975b, p. 32).

Not only should land be kept available to farmers but the latter should be encouraged to remain on and successfully develop their farms.

Because of the highly integrated nature of natural resources, a regional development plan geared to environmental protection is essential. (Canadian Council on Rural Development 1975b, p. 42).

Conclusion

The examination of farm-based recreation and tourist enterprises in Alberta has shown that although opportunities do exist for farmers to become involved in the promotion and operation of these enterprises, only a limited number of operations appear to have been developed. A major problem in assessing the situation is the dearth of information and the reluctance of certain government agencies to release information.

The limited amount of information that exists on the Alberta situation tends to concur with many of the broader aspects of farm-based recreation and tourism revealed by studies undertaken in other parts of Canada, as well as the United States and Britain. However, if farm-based recreation and tourist enterprises are to be promoted as either part of rural development programs or tourism development, a more substantive information base is clearly required. In particular, emphasis needs to be put on understanding the motives of farmers becoming involved in the development of country vacation operations or day-recreation enterprises. Another major area where research needs to be undertaken is an examination of the economies of scale of these enterprises and the extent and advisability of diverting resources from agriculture to recreation. Finally, there needs to be a re-evaluation of the extent to which government agencies can assist in the promotion and development of the country vacation program and day-recreation enterprises, without infringing on the flexibility of the individual entrepreneur and the close association between the farmer and the recreationist or tourist.

CHAPTER VI

SUMMARY AND CONCLUSION

The purpose of this final chapter is to briefly summarize the main findings of the study and to state the apparent implications of the findings for the maintenance and expansion of the agricultural land base in Alberta.

1. The use of agricultural land for recreation is not a new phenomenon, but increasing attention is now being focussed on both the existing and potential role that areas outside the park system can play in accommodating the continued growth in outdoor recreation.

2. Outdoor recreation can be envisaged as a system involving demand and supply components which interact and which ultimately find expression in recreation activities and experiences.

3. The recreational use of agricultural land must be evaluated within this broader context because only a small proportion of leisure time is spent on outdoor recreation in the countryside, and farmland is only one resource among many which the potential recreationist may select as a destination area for a particular trip or activity setting.

4. Five major factors have been largely responsible in accounting for the demand for outdoor recreation: available leisure, income, education, mobility, and individual and household attributes. With few exceptions, the trend is clearly a positive one for recreation, in general, and outdoor recreation, in particular, in Alberta. To a large extent, the continued increase in demand reflects the favourable economic climate relative to other parts of Canada and the subsequent flow of new residents into the province. There are, however, a number of factors which are difficult to predict, including response to increasing energy costs and the concept of changing lifestyles.

5. A number of factors influence the availability of the resource base for outdoor recreation. These factors include the physical characteristics of the resource base, land ownership, management policies, requirements of the recreation activity, and accessibility.

6. Despite the diversity of the bio-physical resource base in Alberta, only a small amount of land with a high capability for recreation (on the basis of the Canada Land Inventory) exists in the province. However, there tends to be an inverse relationship between the quality of the land base for recreation and the quality of the land for agriculture.

7. Only 9.5 percent of the province's area is specifically allocated to recreation/conservation use and most of this recreation land is contained within the mountain national parks. With the exception of Calgary, most major centres of population within the province are located at a considerable distance from the vast proportion of these park areas.

8. The existence of public land is frequently seen as an advantage in the establishment of parks and the provision of public access for recreation. Although privately owned land accounts for only 27.3 percent of the province's total area, the vast proportion of public land is spatially divorced from centres of population and is therefore not strategically well located to provide opportunities for outdoor recreation.

9. A major issue associated with the provision of opportunities for outdoor recreation is the large number of agencies involved and the varying levels of commitment they have to recreation. Consequently, there are difficulties in developing and implementing an integrated approach to planning for recreation opportunities.

10. The existing outdoor recreation/open space system in the province reveals a variety of components. However, although there appears to be a genuine attempt to develop a systems approach within each major component, it is more difficult to discern a cohesion and integration between the different sectors. A major omission at the present time is a regional park program. In addition, agricultural land, particularly that in private ownership, is not perceived as part of the outdoor recreation/open space system. As a result, the recreational use of agricultural land tends to occur by default rather than by design.

11. The impact of recreation on agricultural land is a reflection in part of the number of participants in the different recreation activities which make use of farmland as recreation space. Notwithstanding the growth in participation in a number of outdoor recreation activities, the continued emphasis on those activities which are not particularly demanding from an intellectual or physical standpoint is particularly noticeable. The emphasis on relatively passive forms of outdoor recreation such as driving for pleasure, walking, and picnicking is a distinctive feature.

12. Although data exist to illustrate levels of participation in different types of recreation activities, there is a paucity of information on the location and types of environments in which the outdoor recreation activities take place. However, known spatial patterns of recreation behaviour suggest that the effective day recreation hinterland is likely to be contained within a radius of 50-75 miles of urban centres. As a result, the use of agricultural land for recreation is in many instances not so much a reflection of its inherent capability for recreation, but rather a reflection of its accessibility and convenience for the recreationist.

13. The impacts of tourism and outdoor recreation on the resource base have traditionally been divided into three categories: environmental, economic, and social. In the context of the recreational use of agricultural land, these impacts are particularly important because of the multiple-use relaltionship within which much of rural-based recreation takes place.

14. On the basis of existing studies it is evident that the recreational use of agricultural land results from a variety of factors which may be conceptualized as having a push or pull effect. Reasons for the recreational use of agricultural land include: (1) proximity relative to the user population; (2) the unique contribution that it can make to the outdoor recreation/open space system in providing a compromise between urban open space and wilderness areas; (3) the importance of the agricultural landscape as a functional cultural environment and part of one's heritage; (4) certain types of recreation, such as hunting and fishing are traditional rural pursuits and the former is excluded from provincial parks; (5) outdoor recreation activities requiring linear resources such as trails are not well suited to the smaller parks and, as a result, trails across farmland provide another dimension to the recreation/open space system; and (6) decline in quality of the recreation experience in conventional recreation destination areas has resulted in attention being focussed on less heavily used areas, including farmland.

15. Although there are a number of factors which account for the recreational use of agricultural land, this example of multiple use is not without potential conflicts. Some of the major issues include: (1) conflict that arises over access, trespass, and the question of liability; (2) the harassment of livestock and the physical damage to farm property and crops; (3) the question of compensation for damages; (4) the disruption of private enjoyment of a person's own property; (5) environmental impact resulting from the recreational use of farmland; (6) competition for agricultural hired labour by commercial recreation developments; and (7) the difficulty of buying farmland in areas affected by hobby farms and country residential or acreage development.

16. An examination of relevant background reports to the Alberta Land Use Forum (1976) and the report of the Forum itself reveals that the issues associated with the recreational use of agricultural land identified at that time continue to be major concerns. Moreover, in a number of instances these concerns have increased in severity rather than abated.

17. The competition between alternative land uses is most clearly seen in the conversion or transfer of land-space from one land-use category to another. The conversion of agricultural land to non-farming uses has a number of components: (1) the amount of land involved; (2) the agricultural quality of the land affected; (3) the extent to which the change in use is irreversible or not; (4) whether or not the subsequent use is rural or distinctly urban in character; and (5) externalities from the change in use.

18. Recreation, because it tends to be an extensive form of land use, is not a particularly effective competitor for agricultural land. Consequently, changes in use are localized and limited in extent.

19. Partly as a result of the inverse relationship between land which is rated as good quality agricultural land and that which is highly suitable for most forms of outdoor recreation, recreation developments are seldom located on prime agricultural land.

20. The conversion of agricultural land to many forms of recreational use is not an entirely irreversible land-use change.

21. As a land-use type, outdoor recreation retains many of the basic characteristics of the countryside and the change that takes place is frequently one of function rather than form. Intensive forms of recreation development do, nevertheless, introduce a distinctly urban element into rural areas.

22. It is virtually impossible to provide an accurate assessment of the amount of land effectively used for recreation in the province. The difficulty is caused both by the fact that recreation occurs in a multiple-use situation and the fact that as a land-use type it transgresses the traditional rural-urban breakdown used in land-use analysis.

23. Although land for parks has been traditionally taken from public lands, the relative shortage of public lands, particularly in proximity to major urban centres, could well result in the acquisition of private lands becoming more important in the future.

24. In order to provide recreation open space in areas where there is a shortage of public land or where land acquisition is unacceptable, alternative approaches to outright acquisition may have to become more widely practised.

25. Two general locations are identified where the conversion of agricultural land is more ubiquitous in nature: (1) shorelands of lakes and other water bodies; and (2) the rural-urban fringe.

26. The conversion of agricultural land to recreation at present is not seen as a major threat to the maintenance of the agricultural land base. Competition for agricultural land from recreation is considered insignificant when compared with the land being taken for urban development.

27. Country residential development is perceived by the agricultural community as a major competitor for rural land. There is strong evidence to suggest that country residential development is not solely a settlement issue but that this form of development is a recreation issue.

28. The motivations of the occupiers of country residential properties are similar to those found in other recreation pursuits. Areas having high capability for recreation tend to be the areas desired for country residential development. Consequently, the subdivision of land for country residential development not only precludes the establishment of parks in preferred areas, but owners of acreage properties tend to be unsympathetic to strangers using their land for informal outdoor recreation.

29. The issue of country residential development is not so much a deficiency in technical planning but rather one of administrative expedience and political acceptability of the policies being developed by the planners.

30. In order to provide greater opportunities for informal outdoor recreation, particularly in the rural-urban fringe, a more positive approach is required in the planning and management of reserve land resulting from subdivision development.

31. Recreation on agricultural land is a multiple land-use issue. Despite the apparent compatibility between recreation and agriculture, the necessary compromise to ensure this relationship is becoming increasingly difficult to establish and maintain. Agriculture is becoming more intensive in its use of land, and increasing levels of participation in a variety of recreation activities mean that conflicts will undoubtedly occur in the future.

32. The attribute of the agricultural landscape which largely determines the recreation capability of farmland is the extent and quality of the natural environment occurring within an otherwise modified environment for agricultural production. As a result, in many instances people are having to cross farmland in order to reach the non-agriculturally productive areas of the rural landscape such as wetlands, river valleys or forested areas. The negotiation of rights of way through easements or management agreements could be applied in those instances where levels of use require them.

33. Recreation on agricultural lands tends to concentrate in two broad areas or zones. These areas, in both instances, are fringes between agriculture and alternative forms of land use: the rural-urban fringe and the marginal fringe.

34. The rural-urban fringe is used extensively for recreation because of its convenient location relative to the centres of urban population. Because of the proximity of agricultural land in the rural-urban fringe, the recreational use of this area is associated with day trips or even shorter periods of leisure time.

35. The marginal fringe is the fringe zone between agriculture and the forested and more natural environment of the Green Area of the province. This zone is used predominantly at weekends and vacation periods because of the greater distance from major centres of population. However, the southern foothills are close enough to Calgary for day use. There appears to be increasing competition in the marginal fringe between recreation, wildlife, and ranching interests.

36. An examination of regional variations in the significance of the recreational use of agricultural land confirmed the fact that the rural-urban fringe and the marginal fringe are the areas most likely to experience conflict between recreation and agriculture. Apart from these fringe areas, the question of conflict between recreation and agriculture is not perceived as a major problem at the present time, although the relative significance of the impact of the recreational use of land under agriculture does vary between the regions.

37. Reference to three groupings of outdoor recreation activities (off-road vehicles, non-consumptive forms of outdoor recreation, and consumptive forms of outdoor recreation) illustrates the different perspectives that recreationists have to the recreational use of agricultural land.

38. The use of off-road vehicles for recreation is a contentious issue involving recreationists and landowners. However, productive agricultural land offers relatively little attraction for most of these user groups. There is a general feeling among these recreationists that their needs have not received the same level of attention that has been shown to other recreationists.

39. Non-consumptive forms of outdoor recreation engender relatively little hostility from the farming community as compared with mechanized forms of outdoor recreation. However, access to preferred recreation areas such as lakes and rivers is seen as a growing problem. In the case of environment groups, increasing concern is being expressed about the environmental implications of modern farming methods.

40. Consumptive forms of outdoor recreation are traditional uses of rural land, whether they are hunting or fishing. In the case of fishermen, access to water bodies is perceived as a particular problem. Access is an issue with hunters, particularly with the increasing tendency for landowners to post their land. There is also tension over modern agricultural practices and removal of natural habitat for wildlife. Nevertheless, for the most part there continues to be an amicable relationship between hunters and landowners.

41. The recreational use of agricultural land is not perceived as a major problem by most landowners. There is a general consensus of opinion that many of the problems can be attributed to ignorance and thoughtless disregard for the farmer and his property. Although problems do occur, it is felt that these are caused by a small proportion of the total number of recreationists who make use of agicultural land. In the majority of instances, the impact of recreationists on agricultural land takes the form of annoyance and inconvenience rather than substantial physical damage which might have economic implications.

42. A factor which many farmers regard as a problem associated with the use of their land for recreation is the landowner's rights and obligations towards people entering his land. Many landowners are of the opinion that the Occupier's Liability Act places them at a precarious and unfair disadvantage with regard to the public using their land.

43. Compensation owing to the landowner as a result of the recreational use of farmland may take two forms. In the case of bringing an action to receive compensation for damage to property, many farmers feel that it is rarely worth the effort involved. Compensation to the landowner to ensure access across the farmland for the purposes of recreation has not been considered by most landowners.

44. A major issue is the confusion that results from the number of different statutes that deal with trespassing. There is a general feeling among recreationists and landowners that the legislation needs to be simplified and made more consistent.

45. Closely associated with the argument to reduce the number of different statutes associated with trespass is the issue of right of access to public lands. Although progress is being made towards clarifying the situation, government action is required to produce a clearly articulated policy and the appropriate legislation.

46. Little attention has been focussed on agricultural land as a visual resource. Farmland is perceived mainly in terms of its food producing capabilities and not its amenity quality.

47. At the present time there is no agency in Alberta which really addresses the use of private land for recreation in a comprehensive way. Much might be learned from the role that the Countryside Commission in England and Wales plays regarding recreation in the countryside.

48. Although the recreational use of agricultural land has a long history, the development of recreation and tourist enterprises on farms as a positive aspect of rural planning and agricultural policy is of more recent origin.

49. The promotion of farm-based recreation and tourism by government has been based on the prospect of increasing farm income, particularly of marginal farms. However, it is evident that not every farmer should or could become involved in the operation of recreation or tourist enterprises.

50. A variety of recreation enterprises can be developed on farms. The major distinction is between those farms and ranches which offer accommodation and those operations which are non-residential and have developed day-visitor enterprises.

51. Although country vacation enterprises provide opportunities for a variety of activities, most guests are looking for peace and quiet and relaxation.

52. The geographical distribution of country vacation enterprises shows a distinct preference for the western half of the province.

53. A range of factors influences the development of country vacations. Particularly important is the motive of the farmer. Although income is important, factors such as meeting people and an altruistic concern for improving communications and attitudes between urban and rural people are also relevant.

54. The farmer who is in need of increased income is frequently not disposed towards farm-based recreation and tourism enterprises as a supplemental source of income.

55. Farm-based recreation and tourism can provide a useful source of income if the operation is kept within the operating capabilities of the host family.

56. The organizations involved with country vacations in Alberta include the Alberta Country Vacations Association, the Alberta Guest Ranch Association, and Travel Alberta.

57. Recently completed tourism destination studies for five areas within the province recognize the importance of country vacations and particularly guest ranches as a means of developing the tourist potential of these areas.

CONCLUSION

This examination of the use of agricultural land for outdoor recreation in Alberta has shown that the interface between these two types of rural land use takes a variety of forms. However, except in specific instances, the impact of recreation is not considered to be a major threat to existing farming practices or to the potential productivity of the agricultural land base of the province. In comparison with other competitors for agricultural land, recreation is not considered to be a major issue with the farming community.

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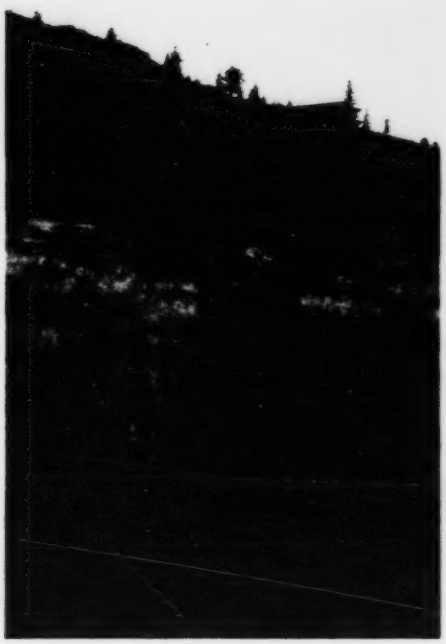
RECREATION ON AGRICULTURAL LAND IN ALBERTA: SUMMARY

Alberta

ENVIRONMENT COUNCIL OF ALBERTA



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Recreation on Agricultural Land in Alberta: Summary

November 1982

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Environment Council of Alberta

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PREFACE

The Environment Council of Alberta is investigating maintaining and expanding the agricultural land base in Alberta. A series of reports has been prepared for this investigation, to inform the public of the issues and questions involved, and to stimulate discussion on this topic.

This summary is based on a report prepared by Dr. Guy S. Swinnerton for Alberta Recreation and Parks and the Environment Council of Alberta. The opinions expressed in this summary are his.

While the summary focusses on aspects concerning agricultural land, the main report also deals with the more general recreation issues in Alberta. Copies of the report and the summary can be obtained by contacting the Environment Council of Alberta.

RECREATION AND AGRICULTURE: THE RELATIONSHIP

Growth and development of Alberta have historically been closely linked with the expansion of agriculture in the province. Cultivated land now accounts for 51.7 million acres, or 31.6 percent of the land area of Alberta, and this agricultural land base is used by a populace increasing in both numbers and activity. Growth and development have meant increased demand for recreation opportunities, urban development, industrial expansion, and improved transportation and communications networks. To some extent, all of these activities have removed agricultural land from production. The impact of the demand for outdoor recreation is the subject of this report.

Although many outdoor recreation opportunities are found in the various parks in Alberta, some activities such as hunting and fishing traditionally have been associated with agricultural areas. Furthermore, there has been rapid growth in other kinds of recreation, including the use of off-road vehicles, and non-consumptive activities such as hiking and cross-country skiing. Existing agricultural land often provides a convenient and attractive setting for these activities, and also provides an alternative location for activities which are banned in many parks, such as hunting and the use of some off-road vehicles. However, the use of agricultural land for outdoor recreation may have adverse social, environmental, and economic impacts.

If agricultural land is to play a major role in accommodating the continued growth in outdoor recreation, then a variety of issues must be addressed and the implications for agricultural production must be closely examined.

The beauty of Alberta's agricultural areas enhances their attractiveness for recreation, but as the demand for more recreation space grows along with the province's population, problems caused by recreational use of agricultural land will become more prominent.

THE OUTDOOR RECREATION SYSTEM

The use of agricultural land for recreational purposes is not a new phenomenon: the rural environment traditionally has provided an impromptu setting for many outdoor recreation activities. However, those assessing the use of agricultural land for outdoor recreation must bear in mind, first, that most people spend a relatively small portion of their total leisure time on outdoor recreation and, second, that agricultural land is only one part of the potential recreational resource base. In addition, the use of agricultural land for outdoor recreation in part reflects the level of availability of suitable alternative environments.

THE DEMAND FOR OUTDOOR RECREATION

The specific types of recreation opportunities demanded vary from those which severely test physical and mental skill to those which are relatively passive and require little or no specialized skill. In addition to this variable, several major factors influence the demand for outdoor recreation; among these are various demographic characteristics, available leisure time, income, education, and mobility.

Although absolute size of the population affects recreation demands, other demographic features such as age structure and geographical distribution are also important. Alberta's population is currently a relatively young one, partly due to the immigration of young, mobile adults, but it might be expected to reduce its use of outdoor recreation facilities as it ages. However, more people are tending to remain active into their later years; the population will also experience natural growth, and these two factors will keep demand for outdoor recreation opportunities high. Population distribution has shifted dramatically during this century. Not only have urban centres expanded, but the farm population has declined. This concentration of much of the province's population in urban centres means that weekend "escapism" to the surrounding rural areas is likely to increase in intensity. Furthermore, the decline in rural farm population as people move to urban centres means that people who in the past could use their own farmland or that of their friends for recreation no longer have this opportunity, which places increased demand on the land of those farmers remaining in agriculture.

Generally, increased availability of leisure time tends to be reflected in increased recreation participation. The amount of discretionary time available to most people has increased in recent years through longer paid vacations, shorter and more flexible work hours, the trend toward fewer children, and the acceptance of technological innovations in the home.

There also seems to be a positive relationship between disposable income and the demand for tourist and recreation facilities; that is, spending on recreation pursuits increases as disposable income increases. Between 1973 and 1979 personal disposable income more than doubled in Alberta, although actual purchasing power was eroded due to inflation. As a result, people may turn to forms of recreation which require less expensive equipment and have fewer costs associated with participation, or may buy durable recreation items that are frequently used.

Changes in mobility are also expected to affect patterns of recreation activity. Most Albertans have become accustomed to having a high degree of personal mobility because they own cars and fuel is abundant. Although people may be reluctant to completely give up the convenience and comfort of the private automobile, rapidly rising fuel costs and uncertain supplies may cause a reduction in the distances people are willing to travel for recreation and, to some extent, the number of trips and the types of activities in which they engage.

THE SUPPLY OF RECREATIONAL RESOURCES

Defining and assessing the recreation resource base is often problematic. Recreational resources are viewed and defined differently by different groups of people. Although the biological and physical features of an area are important in resource assessment, many other factors determine whether or not a particular environment or resource can be used for outdoor recreation. In addition to bio-physical characteristics, location and accessibility, ownership, management policies, and specific environmental requirements of the recreation activity are important factors.

Horse riding at the Overlander Motor Lodge east of Jasper National Park East Gate. Recreational operations in the eastern slopes of the Rockies not only have access to some of Alberta's most highly rated recreational land, but rarely conflict with agricultural operations. This felicitous arrangement may not be as easily achieved in other parts of the province.

Bio-physical Considerations

There have been various attempts to describe recreational opportunities based on the resources of Alberta's diverse landscape, but such approaches give little indication of the province's recreation potential. As part of the Canada Land Inventory program, the resource base of the province was classified on the basis of land capability for outdoor recreation. Under this classification, class 1 (very high capability) lands were those with a natural capability to engender and sustain very high total annual use based on one or more recreational activities of an intensive nature. Lands were assigned progressively lower ratings based on their physiographic features and their ability to attract and sustain recreational use. Under this system, Alberta has only about 395,000 acres of land (2.4 percent of the province's area) in the top three capability classes; most of this land occurs along shore zones, river corridors, or on the eastern slopes of the Rocky Mountains adjacent to the national parks.

Although perhaps visually less dramatic than the foothills bordering the Rocky Mountains, the prairie grasslands are an important component of the ecological diversity of the province. Such farmland provides opportunities for extensive forms of outdoor recreation such as viewing associated with driving for pleasure. In addition, ponds and riparian lands in the prairie area provide opportunities for dispersed wetland wildlife hunting and viewing. Extensive areas are Crown land under grazing dispositions and as a result, conflict can occur because of the varying interpretations of public access to Crown land.

However, there are two limitations of the Canada Land Inventory system, first, areas unable to support high levels of use being assigned a low rating regardless of their quality and, second, no account being taken of the advantage of an area due to its location.

Although all lands have some capability for outdoor recreation, availability is partly determined by the proportion of the land base which is specifically designated for recreational purposes. One estimate of the use of land in Alberta indicates the proportion designated for recreation and conservation to be only 9.5 percent (or about 15.5 million acres), including the national parks and wilderness areas. However, in substantial sections of such areas, recreation

is virtually non-existent. The national parks constitute 86.2 percent of the land dedicated to recreation and conservation, but a major consideration in terms of availability of this land is its location. There is a considerable amount of federal public land in the province, but much of this is not strategically well located to provide day-use opportunities for outdoor recreation. As a result, the growth in recreation demand has important implications for the use of private land for recreation, most of which is currently used for agriculture.

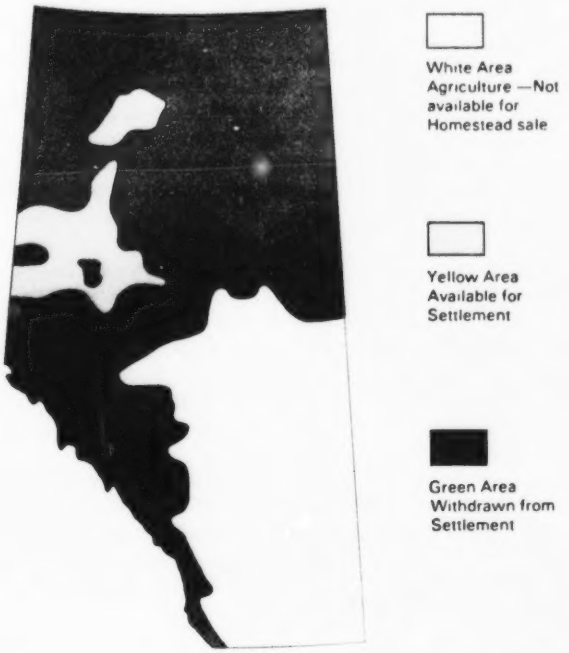
Fifty-nine provincial parks have also been designated in Alberta, but population growth means that a high degree of competition exists for available campsites within weekend driving range of most urban areas. Private campgrounds have been established as one alternative, many of them on agricultural land. Many outdoor recreation activities associated with camping would also likely take place on agricultural land, especially when the park or campground is not capable of providing dispersed and linear recreation facilities such as riding or hiking trails. The establishment of regional park systems would ease pressure on existing parks and rural landowners, but problems relating to current land ownership, administration, and capital and operating costs must first be solved.

Land Ownership

Land ownership is another factor which affects the availability of land for recreation. Arguments for greater public control of land have emerged, based on the belief that social benefits rather than purely economic values should be considered in making land use planning decisions. These benefits include the preservation of attractive landscapes and open space areas, wildlife conservation, and the right of access to rural land. The existence of public lands should expedite the implementation of policies which incorporate the public interest, including the establishment of parks and the integration of recreation with other forms of land use.

Elk Island National Park. Heavy pressure on select recreation areas such as national or provincial parks, particularly within the day-recreation hinterland of major centres, frequently motivates some sectors of the population to find alternative destinations which are less crowded. Farmland may provide an alternative which is quieter, more peaceful, and yet provide opportunities for informal outdoor recreation.

Approximately 63 percent of the land in Alberta is owned by the province, 10 percent is controlled by the federal government, and about 27 percent is under private title. However, most of the public lands are located in the Green and Yellow areas (see map), and thus are spatially divorced from centres of population, while the privately owned lands are predominantly in the White Area within which the greater part of the province's population lives. Furthermore, significant portions of the public land in the White Area are under grazing permits or leases, and in some cases, the permit or lease holders have adopted the attitude that they own the property. Such attitudes would very likely cause problems if a decision were made to alter the use of such areas.



Management Policies and Administration

Management policies and administration also influence the supply of recreational resources. One issue associated with planning and maintaining the outdoor recreation system is the large number of agencies involved and the varying levels of commitment they have to recreation. As many as eight agencies at the provincial government level are involved to some degree in the outdoor recreation field. The major concerns and expertise of most of these agencies relate to non-recreational issues, and therefore conflicting interests mean that development of recreation policy is very difficult. The situation is further compounded by the number of committees which exist in each agency, and the large number of active, organized recreation groups in the province.

RECREATION AS A COMPETITOR FOR AGRICULTURAL LAND

COMPETITION AND LAND USE CONVERSION

Competition among alternative land uses is best seen in the conversion of land from one category of use to another. Since agriculture is extensive in nature, and is thus unable to compete with more intensive forms of land use in the land market, agricultural land is very vulnerable to conversion. However, except for some forms of recreation such as theme parks and summer cottages, recreational land use is less intensive than agriculture; thus recreation is not a particularly effective competitor for agricultural land.

In addition, there generally tends to be an inverse relationship between the quality of land for recreation and the quality of land for agriculture. Landscape features such as variations in topography and vegetation which make an area attractive to recreationists often make the land difficult to farm. Thus, recreation and agriculture may not be competitors in many areas.

Furthermore, conversion of agricultural land to many forms of recreational use is not irreversible compared with conversion to urban purposes. A more dangerous problem in the long term may be the almost imperceptible change in the character of those rural areas where there is increasing recreation pressure, because this pressure is not perceived as a planning issue until the land use changes are well entrenched.

On the whole, recreation and agriculture may not seem to be in serious conflict, but there are several cases in which they may compete. These cases, discussed below, have a common theme: if land is close to an urban centre, recreation and agriculture may be forced to compete for the land.

Rural/Urban Fringe

In fringe areas near urban centres, the kinds of recreation which are most likely to remove agricultural land from production include golf courses, riding schools, and private parks. It is expected that these pressures will continue to be most pronounced in areas near Calgary and Edmonton.

Parks

Most of the land now allocated to parks is in non-agricultural areas. Since much of the demand for outdoor recreation facilities comes from urban centres in agricultural areas, public acquisition of some private land close to the source of the demand may be necessary if this pressure continues. However, most private land acquired for provincial parks is grazing land and not high-quality agricultural land.

There is also a need for more water-based parks in Alberta. Unfortunately, lakes and reservoirs are not equally distributed throughout the province, and there is a shortage of high-quality shorelands near major urban centres. A consequence of this shortage may be increased pressure from both developers and recreationists on landowners whose property abuts these features.

Country Residential Development

For the most part, the direct loss of agricultural land to outdoor recreation through parks and in the rural/urban fringe has been localized and limited in extent. More concern has been expressed about land taken by country residential development, which although not an actual form of recreation, is closely connected with recreation pressures on the agricultural land base.

Country residential properties (often called acreages) are frequently owned by people who work in an urban centre but who wish to live in a rural area. In addition to using a large amount of land, country residential development affects the value of adjacent property, and can also affect the social and economic conditions of the nearby rural community. Prospective country residents often have motivations similar to those of outdoor recreationists in that they are seeking the leisure and amenity values of areas away from the urban setting.

Some effort has been made by regional planning commissions to direct country residential settlement to land less suited for agriculture, but their efforts may lead to problems with other groups, because land with low capability for agriculture often has high capability for recreation or may provide habitat for fish and wildlife. Other problems can occur as a result of the attitude of those owning country residential property. The fact that many of these people acquired their land to ensure privacy, seclusion, and the opportunity to engage in outdoor recreation on their own terms, often makes them reluctant to share their land with others by permitting access. This can put more pressure on adjoining property, which is often agricultural land. Designating land near country residential developments as public open space can also be complicated, as the negotiation of access and management agreements may involve many landowners whose property is often less than five acres in size.

Indirectly, country residential development can affect recreational use of agricultural land by taking up land which otherwise could be left for parks or other outdoor recreation facilities. Once the potential of an area for recreation or country residential development has been recognized, land values increase, and governments are usually reluctant to pay the higher prices necessary to acquire such land for public use.

RECREATION ON AGRICULTURAL LAND: A MULTIPLE LAND USE ISSUE

Many of the issues associated with the use of farmland for recreation relate to whether or not privately owned land should be available for public use. Agricultural land is often desirable for outdoor recreation because:

- it is close to the user population,
- it provides an aesthetic compromise between developed urban areas and rugged wilderness areas,
- it has value as a functional cultural environment and part of a personal heritage, and
- the quality of the recreation experience available in traditional recreation areas such as parks has declined due to overcrowding and other factors.

Rangeland West of Calgary. These areas with varied topography and vegetation provide opportunities for extensive forms of outdoor recreation.

THE MULTIPLE USE CONCEPT

Many outdoor recreation activities are extensive and non-consumptive, and therefore can often be accommodated in a multiple land use situation. However, despite the apparent compatibility of recreation and other forms of land use, including agriculture, the compromises necessary to maintain multiple land use are becoming more difficult to achieve. Both agricultural use of land and recreational use of land have intensified in recent years. Farmers are seeking to improve productivity and often land is cleared to increase the cultivated acreage. This can result in both aesthetic and functional changes to the landscape. As well, even the non-consumptive forms of recreation such as hiking and nature observation can make a significant environmental impact when large numbers of people are involved.

In Alberta, recreational use of agricultural land has been concentrated in the two broad areas, or "fringes", between agricultural areas and areas devoted to other forms of land use.

The Rural/Urban Fringe

Agricultural land in these areas is used extensively for recreation, mainly because it is accessible to urban centres. In addition, predominantly natural areas such as the Cooking Lake Moraine near Edmonton and the Bow River Valley near Calgary experience significant pressure from recreationists, and conflicts can occur in such cases, as access to these features may be through agricultural land.

The Marginal Fringe

This is the zone between intensively farmed land and the forested environment of the Green Area; the area most affected by recreation is the agricultural margin of the Eastern Slopes and foothills. This fringe provides the outdoor recreationist with considerable variety in the natural landscape, and also with relatively easy access to much of the Green Area.

Ranching is the major agricultural activity in the marginal fringe, as soils are too poor for intensive cropping. With heavier use of this area in recent years, some conflicts have already been experienced, not only between recreationists and ranchers, but also between different recreation groups (for example, hikers versus users of off-road vehicles).

It seems that competition for land in the marginal fringe is increasing among recreationists, wildlife managers, and ranchers, and the issue is further complicated by the fact that much of the land is publicly owned but under grazing dispositions.

TYPES OF RECREATION

A variety of outdoor recreation activities make use of agricultural land, and these activities can be divided into three major groups: use of off-road vehicles, non-consumptive forms and consumptive forms of outdoor recreation.

Off-Road Vehicles

This user group includes those who operate snowmobiles, four-wheel drive vehicles and motorcycles. This group has received considerable criticism from both recreationists and the farming community; however, many members feel that an adverse stereotypic image of the off-road vehicle owner, based on the irresponsible behavior of a few people, is at the base of this criticism. For the most part, intensively farmed land holds little appeal for off-road drivers who tend to be more active in the marginal fringe or in the forested lands of the Green Area.

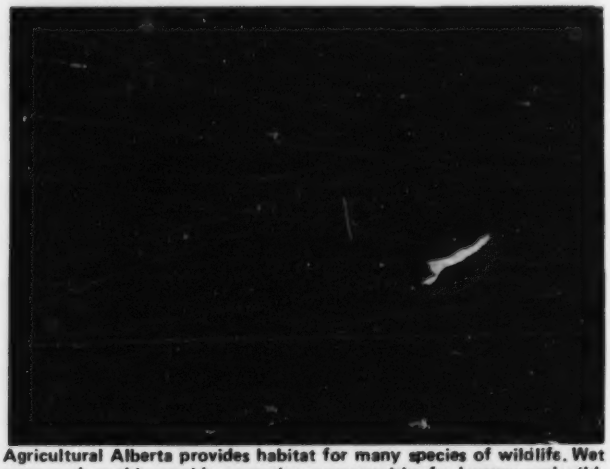
Non-Consumptive Forms of Recreation

This group includes cross-country skiing, hiking, canoeing, and conservation activities. Many of these activities have become more popular in recent years as interest in physical fitness has increased; other factors include the relatively low costs of equipment and participation, as well as the convenience of not having to travel great distances to participate.

Some trail associations in the province, in co-operation with private landowners, have established hiking trails in areas adjacent to both Edmonton and Calgary. On the Waskahegan Trail near Edmonton, conflicts have been minimized by having landowners determine the alignment of the trail across their land and by the fact that the trail has not had excessive use. There is clearly a need in Alberta for the establishment of additional trails for hiking and other linear-oriented recreation activities. Also, conservation and wildlife protection groups are concerned about the alteration or removal of natural habitats by modern agricultural practices.

Consumptive Forms of Outdoor Recreation

Hunting and fishing have traditionally been associated with agricultural areas, and the number of people active in both forms of recreation are increasing. Access to fishing and hunting areas is a major source of tension between these recreationists and landowners, although there continues to be a generally amicable relationship. This topic is considered in more detail in the ECA publication *Fisheries and Wildlife Resources and the Agricultural Land Base in Alberta* by W.M. Glasgow.



Agricultural Alberta provides habitat for many species of wildlife. Wet areas such as this provide recreation opportunities for hunters and wildlife observers, sometimes at the expense of the farmer who owns the land. Conflicts which may arise include harassment of livestock, damage to farm equipment, and questions of liability.

CONCERNS AND ISSUES

For the most part, the use of agricultural land for recreation occurs by default rather than as a result of planning by the landowner or government. Landowners exhibit a range of attitudes from acceptance to resentment concerning the use of their property for recreation. To date, recreational use of agricultural land is not perceived as a major problem by most farmers in Alberta; they attribute many of the problems which do occur to ignorance and thoughtless disregard for private property rather than deliberate vandalism. Such problems reflect the general public's lack of knowledge of farming practices and are likely to increase in significance as more people become separated from the farming community.

There are, nevertheless, several specific issues which relate to recreational use of agricultural land. One of the major issues concerns access and the question of liability. Some forms of outdoor recreation are more compatible than others with agriculture; for example, landowners often permit access for non-consumptive activities while denying permission for consumptive and vehicle-based forms of recreation. In other cases, recreationists may only require access to farmland in order to reach a destination which is public land, such as a river or forested area. Farmers have voiced concern about the rights and obligations of landowners toward the public using their land — the opinion has been expressed that existing legislation places them at a disadvantage in this regard. Further complicating the matter in Alberta is the confusion that arises from the number of different statutes dealing with trespassing, especially those relating to access to public lands under disposition.

Closely related to the issue of access are problems which occur when people gain access to private land, with or without permission. Actual physical damage to the land, such as increased erosion, can occur as a result of heavy recreational use, particularly along hillsides or watercourses. Other areas of concern to landowners include damage to crops, fences, and machinery; harassment of livestock; dumping of garbage; and indiscriminate use of firearms. Compensation for property damage can be very difficult for a landowner to obtain, because civil action is normally required.

AGRICULTURAL LAND AS A VISUAL RESOURCE

The aesthetic value of the countryside and the maintenance of its rural integrity have received little attention in Alberta. In contrast to the attention focussed on the visual quality of parks and wilderness areas, the rural landscape has been largely neglected, although it is this landscape which is most vulnerable to pressures of urbanization and changing farming practices. This neglect could lead to a reduction in the quality of the environment for those who live and work in the countryside. Also, if greater importance is going to be placed on farmland as a recreation resource for urban populations and tourists to Alberta, more attention may need to be focussed on maintaining the aesthetic qualities of the rural landscape.

FARM-BASED RECREATION AND TOURIST ENTERPRISES

The deliberate involvement of farmers in the promotion and operation of farm-based recreation and tourist enterprises is relatively recent. Such operations can make a significant contribution to farm income, particularly in areas which are of marginal capability for agriculture. Often areas which are marginal for agriculture have the advantage of being near recognized tourist destinations such as national parks, mountains, or forest reserves. Thus, providing camping sites or farmhouse accommodation can be a profitable operation since these facilities usually require minimal capital expenditures.

Farms and ranches associated with the tourist industry tend to be one of two types: those which provide accommodation, and those which do not. The latter are usually located within easy driving distance of population centres and focus on activities such as sale of farm produce, farm catering, and educational visits by school groups.

Many of the enterprises which provide accommodation are vacation farms or ranches, but facilities and types of activities available vary widely. It is difficult to estimate the number of farm and ranch vacation operations in Alberta; Travel Alberta has identified nearly 40, mostly in the western half of the province, but this figure likely underestimates the total number.

Country vacations are attractive to people for various reasons. Foremost is the desire to experience a change in life style and to interact with hospitable rural people. Some farms and ranches provide an opportunity for guests to participate in farm chores, as well as other activities associated with rural environments, including horseback riding, fishing, and handicrafts such as spinning and weaving.

The success of these operations often depends on the motives and capabilities of farmers and their families. In the case of those operations which provide supplemental income, the farm family must ensure that the tourist enterprise does not become too large for them to operate themselves or so time-consuming that it interferes with management of the farm.

The economic, social, and environmental impacts of tourism in rural areas are similar to those of outdoor recreation since the types of activities are similar. A fundamental difference is that providing accommodation allows the farmer/rancher to receive income which would not be generated by more informal recreational use of his land.

A LOOK AT THE FUTURE

Agricultural land in Alberta can be used for a variety of outdoor recreation activities, and for the most part, such activities are not considered to be a major threat to the agricultural land base or to agricultural productivity. However, it is generally held that the overall effects of recreation on the environment are related to the number of participants, and the number of people who take part in recreation activities is expected to increase. What effects will this increase have on recreation facilities, and on agricultural land, particularly near urban centres? More parks could be established, but much of the land near populous areas, where recreation demand is greatest, is privately owned. Furthermore, many farmers are of the opinion that more parks simply attract more people to an area, and the spillover is almost certain to affect farmland, especially if some recreation activities continue to be banned in parks.

Most agricultural land is privately owned, yet members of the general public often expect to have access to this land. As more people seek use of agricultural land, will the "gentlemen's agreements" with landowners continue to be honored? Is it fair to expect a landowner to be liable for those persons using his land yet have considerable difficulty receiving compensation when his property is damaged? Should all recreationists wishing to use private land be charged a "user fee" to establish a fund from which compensation could be paid?

To maintain existing levels of agricultural productivity in Alberta, it seems likely that either the intensity of agricultural activities must increase or additional land must be cleared for cultivation. Both of these alternatives could reduce the availability of land for recreation. There are many advocates of the multiple land use concept, but this approach can be a less than satisfactory compromise for everyone. Should lands, particularly those well suited for one activity, be designated for that single purpose, rather than trying to encourage co-operative multiple land use?

Many government agencies and organizations are involved with outdoor recreation in some way, yet there seems to be a reluctance to implement policies which recognize the importance of the agricultural land base for non-consumptive forms of outdoor recreation. What role should be played by agencies whose mandate is not specifically and primarily related to outdoor recreation? How could these agencies be most effectively co-ordinated?

There is currently no agency in this province to address the use of private land for recreation in a comprehensive way. In England and Wales, where private land is used extensively for recreation, the Countryside Commission was established in 1968. This commission is an advisory and review body concerned with all matters relating to the conservation of, access to, and recreation in the countryside. Would such a commission be useful in Alberta? Who should be involved to ensure that the interests of recreationists, conservationists, and landowners are protected?

For Further Information

This summary is based on information presented in the ECA report *Recreation on Agricultural Land in Alberta* by Dr. Guy Swinnerton. Copies of his report are available from:

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